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# EFFECTS OF U.K. DIRECT INVESTMENT OVERSEAS

## Final Report

W. B. REDDAWAY in collaboration with
S. J. POTTER and C. T. TAYLOR

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# Effects of U.K. Direct Investment Overseas

## FINAL REPORT

W. B. REDDAWAY
*Director of the Department of Applied Economics, University of Cambridge*

in collaboration with S. J. POTTER
and C. T. TAYLOR

This is the sequel to the much-discussed 'Reddaway Report', published in March 1967; it contains the final results of one of the Department's most important research projects, which has had the full support of the Confederation of British Industry.

A leading feature of this Report is the presentation and analysis of entirely new information designed to measure the so-called 'unquantifiable' benefits derived by the parent companies from two-way exchange of knowledge with their overseas subsidiaries. This permits a full assessment of the effects of overseas investment on the national income.

Additional information is also provided about the effects on the balance of payments discussed in the Interim Report, and the conceptual and statistical approach is set out at greater length.

The two Reports make a permanent contribution to the theoretical analysis of the effects of overseas investment, as well as providing guidance of the highest relevance to immediate practical problems. They are of importance to British companies investing overseas, to students and teachers of economics, and to everyone interested in current issues of public policy.

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# Effects of U.K. Direct Investment Overseas

## Final Report

*by W. B. REDDAWAY*

*in collaboration with*

*S. J. Potter and C. T. Taylor*

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# Acknowledgements

It is my pleasant duty to put on record my very sincere gratitude to all the numerous people whose cooperation has been indispensable to the production of this book.

In the main, the list is the same as for the Interim Report, published in March 1967: the Confederation of British Industry, which has continued to respect most scrupulously the independence which the Department was promised in the conduct of the research; the collaborating companies listed in the Interim Report, which gave us a 100 per cent response when we inflicted on them a further difficult questionnaire – this time about the exchange of research results and know-how, with their overseas subsidiaries, which enabled us to open up quite new ground: and all the people involved at the Department of Applied Economics – amongst whom I must give special mention to Mr. C.T. Taylor, who continued to render invaluable service up to the very end, and to Mr. S.J. Potter, who left us in January 1968 for the Organisation for Economic Cooperation and Development,, but who continued to work for us in his spare time.

I must however add some newcomers: the additional companies now providing us with information – natably the plantation companies, which we had to leave on one side in the Interim Report, and their Associations, which took off our shoulders much of the detailed work in this field; the commentators on the Interim Report, who stimulated us to explain various things more fully – with a special word for Professor Russell, of Adelaide, whose comments are responsible for the whole of Chapter XX; and finally the authors of a parallel report into the effects of overseas direct investment by American companies – Professors Hufbauer and Adler – whose publication arrived too late to influence our thinking, but in time to bring us much reassurance.

The aid of all these people has made it possible to do a job of applied economic analysis which I thought at the outset would be largely impossible. In describing their contribution as 'indispensable' I am sticking to my invariable rule of 'truth in testimonials'.

W.B. Reddaway

July 1968

# Introduction to the Final Report

Introductions are things which can often be skipped, but the reader who skips this one is likely to find difficulty in understanding the plan of the book, and its relationship to the Interim Report published in March 1967. I apologise for this fact, but the circumstances are exceptional, and a few words of historical explanation seem essential at the outset.

The Interim Report was originally intended primarily for the Confederation of British Industry, as a *quick* method of giving them the initial results of the research: the document was to be an 'open' one, but there was no intention of publishing it. The definitive results of the entire research were then to be published when the operation was complete, and the resultant book would supersede the unpublished Interim Report in all respects.

In the event, the process of working up the results intended for the Interim Report proved more fruitful than had been expected, and it became possible to produce – albeit at a somewhat alarming pace – an analysis of the results which went a great deal further, and answered many more questions, than had been expected. As this covered a large part of the ground, and as its results seemed likely to need little modification at the end of the research, it was considered better to make the Interim Report properly available to everybody by publishing it.

This decision left open the question whether the Final Report should cover the whole field of the research and supersede the Interim Report, or alternatively be a sequel to it. The former procedure would mean that many readers, who had already studied the Interim Report, would have to read through a great deal of material which would be essentially covering old ground, to see whether there had been any modifications; on the other hand, the second alternative would mean that new readers would need first to read the Interim Report, although some parts of it would have been modified in the Final Report.

The obvious way of deciding this issue was to wait until we were ready to write the Final Report, and then to consider how far the Interim Report required modification in the light of further information or further analysis and reflection. As things have turned out, I find that there is remarkably little which requires significant amendment, and it has therefore seemed better both for the author and for the majority of readers to treat this one as a *sequel* to the Interim Report, rather than as something which would replace it.

At the same time, it is obviously necessary to incorporate all the information which is now available, including notably the results from the plantation companies which were left on one side at the beginning of the research, as well as returns from the late-comers in the other categories, and also certain revisions which we received too late to incorporate in the Interim Report. So far as the *statistics* go, therefore, the whole picture is given in this report, with a few trifling exceptions : the tables in the Interim Report are to be regarded as completely superseded – though the inferences from most of them are very little affected.

### Plan of the Report

We decided, therefore, that this report should be designed primarily to suit the position of people who have already read the Interim Report, and laid out its plan as follows :-

(a) The numbering of pages, chapters and the like has been made continuous with that adopted in the Interim Report, so that all cross-references can follow a very simple system. An index is provided at the end which covers both reports together.

(b) A summary has been provided at the end of this volume, which covers the whole of both reports.

(c) All the tables given in the text of the Interim Report (except those relating to the oil companies, discussed below) have been revised to take account of the more complete returns which we now have, including those relating to plantations : these tables are published in Appendix H, under their original numbering, and a brief note has been added in the few cases where the conclusions reached in the Interim Report need significant amendment.

(d) In general, the tables in this Report – including the revised versions of those in the Interim Report – show a sub-total for all the subsidiaries etc. of *manufacturing* companies, as well as a total for the whole sample (excluding the oil companies). For many purposes it is more meaningful to consider the sub-total for manufacturing, rather than the composite result obtained by adding the figures for mining and plantations to that relatively homogeneous group.

(e) The Interim Report was divided into three Parts, and the main text of this volume adds two more : Part IV essentially gives a further analysis of the effects of U.K. direct investment overseas on the British balance of payments, which was the main subject of the Interim Report ; and Part V deals with the effects on the national income of the United Kingdom, including the issues noted at the end of the Interim Report as having been 'squeezed out'.

(f) Part IV has two main objects. First, it extends the analysis given in the Interim Report – e.g. by examining the initial results of newly established subsidiaries, as against the average results for new and old ones, or by relating more results to the size of the 'U.K. stake', as well as to the net operating assets ; this is the subject-matter of Chapters XV to XVIII. Secondly, it discusses the reasons why certain methods were followed in the Interim Report which were described there, but not justified at any length ; those readers who are not interested in such points can skip Chapters XIX to

XXI without losing the thread of the argument, but sections D, E and F of Chapter XXI describe two innovations, compared with the Interim Report, in the treatment of changes in the value of money which are important to an understanding of the results.

(g) In Part V, a main object is to give an assessment of the gains to the United Kingdom arising from the sharing of research expenditure and know-how between the U.K. parent company and its subsidiaries overseas, including the value of the 'technological feed-back'. But comparative profitability and other issues are naturally considered too.

(h) Finally, there are a number of appendices which deal with matters which seem to be worthy of record, but which did not fit naturally into the scheme of the main Report.

## The Oil Companies

In relation to all this, it is necessary to record one major disappointment of the research. The Interim Report gave, as part of the 'historical record', some very valuable statistics for the oil companies, and expressed the hope that in the Final Report there would be an analysis of the effects of this type of overseas investment. Such an analysis depended fundamentally, however, on the possibility of producing statistics for an 'alternative position', in which it would be assumed that the amount of overseas investment done by the oil companies had been somewhat smaller: the reasons why this special procedure was needed were explained on page 22 of the Interim Report.

This objective was pursued with great diligence, and the Department produced a scheme of analysis – supported by illustrative figures based broadly on published information for one company – which seemed to it to offer the hope of yielding results which would be considerably better than nothing. The oil companies eventually decided, however, that they were not prepared to attempt an analysis along these lines, on the grounds that any choice of assumptions for the alternative position would be too hypothetical to serve as the basis for a computation of the effects of a changed amount of investment. The Department were not persuaded on this point, but regretfully had to accept the decision.

To avoid misunderstanding, I feel that it is wise to put explicitly on record that the historical statistics do not provide a basis from which one can assess the effects of overseas investment by the oil companies, in the sense which the Department considers relevant: in other words, it is not possible to deduce from the historical statistics what the effect would have been if somewhat more (or less) had been invested overseas by the oil companies, as compared with what actually happened. On this matter we can offer no guidance whatever: our illustrative figures seemed to give us certain broad indications, but in the circumstances we have felt bound to keep these tentative impressions strictly to ourselves.

As a particular illustration of the above, I feel it best to state specifically that I can see no justification for using either of two methods which have been suggested for assessing the very important matter of incremental profitability.

The first suggestion is to calculate the additional profits accruing to the U.K. in the last two years of the period, compared with the average of the first two years, and relate this to the corresponding increase in the U.K. stake – which gives a figure of a little over 1 per cent. This procedure ignores however the fact that conditions in the oil industry made it much harder to earn profits in the later period, and it is not possible to disentangle this adverse factor from the effects of the increase in capital.

The second suggestion is simply to use the average profitability of all capital in use, whether old or new as given in Table VIII. 2; this shows an average post-tax return on U.K. stake of 13 per cent, which would be reduced somewhat if based on replacement cost, but would still be a high one. This is useful as part of the historical record, but with an integrated business and conditions varying greatly between different units of investment it is not what we want for measuring 'effects'.

The trouble is not that these two methods give wildly different answers, but that neither is legitimate: without a plausible set of figures for the alternative position the problem is insoluble.

# Part IV

# BALANCE OF PAYMENTS EFFECTS

## XV Overseas Production, Exports and the Size of British Companies

One of the advantages of producing a report in two discrete sections is that, in writing the second, one can take advantage of comments on the first. This chapter is largely inspired by the realisation that the Interim Report had not pulled together a number of points which are scattered through it, so as to present a comprehensive view of the relationships between overseas production, exports and the size of the overseas markets which British companies can command. As it happens, the delay has brought one benefit, since we can now add some rough data which we did not have before, about the size of U.K. sales by the reporting companies (or groups of companies); consequently we can now put the external activities into better perspective, by giving a picture of the whole business done by the groups.

This statistical presentation constitutes a fit and proper starting point for the Final Report in another way also: it serves as a very helpful background for the analysis in Part V of the role of research expenditure, etc., which is the main new contribution provided in this Report.

### A. Overseas Production and Exports

We received a wide variety of comments of the following general type: 'If a company is to expand its sales in an overseas market, it must usually develop production there, and this requires investment, so that investment and sales seem to go together. This seems to me very important, but I do not see where it appears in your analysis: are you implying that the company has a *choice* between overseas production on the one hand and making the goods at home and exporting them on the other? Or how exactly do you see the relationship?'

One point may be dealt with very speedily. In no sense whatever did the Interim Report assume or assert that a manufacturer could command a certain market in an overseas country, which he could supply from the U.K. or by local production at his choice. On the contrary, it was explicitly assumed throughout the book (starting with page 23) that if a British company did not establish a producing unit in the overseas country, then somebody else would, and the British company would have to compete for the market with that alternative producer. This was the logic behind the estimate of what U.K. exports would have been in the alternative position, as explained in Chapter XII and Appendix E.[1]

What the Interim Report failed to do was to set out the statistical results of this comparison in a way which would stress the fact that the ownership of manufacturing facilities abroad increases enormously the sales in overseas markets by British-owned companies. This is an interesting fact in itself, even though it has relatively little effect on exports from the U.K., because the overseas production so nearly balances the increase in total overseas sales.

The whole picture may be seen conveniently in Table XV.1, which brings together the key facts which were previously scattered in the text and tables of Chapters VI and XII. The basic statistics were not designed for this precise purpose, and the notes describe the adjustments used to make the basis of valuation, etc., more comparable, but the main conclusions from the table are crystal clear. The figures used are our final ones, but have been confined to subsidiaries, etc. of *manufacturing* companies, as the point is primarily of interest for them.

Table XV.1. 'Continuing'[a] overseas sales by subsidiaries of reporting manufacturers

(Annual averages, 1955–64; £ million; 15 countries)

| | Actual | Alternative position | Actual less alternative |
|---|---|---|---|
| U.K. Exports: | | | |
| Input items, sold to subsidiary | 51 | 0 | + 40 |
| Input items, sold to outside customers | 0 | 11 | |
| Finished goods sold to subsidiary for re-sale abroad | 110 | 137 | – 27 |
| Total | 161 | 148 | + 13 |
| Local production | 1,599 | 0 | +1,599 |
| Total sales abroad to outside customers[b] | 1,764 | 222 | +1,542 |

[a] Capital equipment exported for use by the subsidiaries is not included in the table.

[b] 50 per cent has been added to the value of U.K. exports for outside customers, to make the valuation more comparable with that of local production.

---

[1] One rash commentator who asserted that the Report had made the assumption about 'choice' was challenged to produce a reference in support, and failed: he had indeed to agree that the nature of our basic assumption was re-emphasised by the inclusion on page 110 of a brief analysis of a modified assumption, under which the hypothetical alternative producer's output was only 90 per cent of the British company's, instead of 100 per cent.

Since experience with the Interim Report shows that this type of table presents difficulties to some readers, it may be helpful to run through it in some detail, column by column.

The actual results. The first column shows what actually happened, taking the annual average for the years 1955–64.

The overseas subsidiaries bought from the U.K. £51 million (f.o.b.) of input items – components, semi-manufactures, etc. – which they used in their local production: sales of locally made products were worth £1,599 million, so that the 'U.K. content' of these goods and services was rather over 3 per cent.

In addition, the overseas subsidiaries bought £110 million (f.o.b.) of British exports for re-sale. To get a figure for the value of these goods when sold abroad we arbitrarily added 50 per cent to this to cover freights, tariffs and the subsidiaries' margin; this gives a total for sales abroad to outside customers of £1,764 million, with local production accounting for over 90 per cent.

The alternative position. The second column shows a hypothetical alternative position, in which the British companies are assumed to have developed no local production, but other producers have established plants with roughly equal output. These alternative plants were assessed in Chapter XII as buying £11 million of U.K. goods for use as 'inputs', and of course they rank as outside customers. The analysis of Chapter XII also showed that U.K. exports of finished goods would probably have been rather higher on balance than the 'actual' figures, at £137 million (f.o.b.), making total U.K. exports of £148 million.

With no overseas production, overseas sales by the British companies are confined to these two items, and their value abroad is put at £222 million.

'The effects'. The third column is simply the difference between the other two, and thus measures the 'effects' of overseas production by British subsidiaries.

So far as exports are concerned, the effect was a small net increase of £13 million, which was equivalent to 1 per cent of the assets employed overseas: this was the topic with which the Interim Report was primarily concerned.

For the total sales abroad, however, the effect is an increase of £1,542 million – which is equal to more than 140 per cent of the assets employed overseas, though that fact is not particularly important.

There is, therefore, no mystery about the matter, and no conflict between the Interim Report's statement that the ownership of overseas manufacturing facilities had little net effect on U.K. exports, and the view that overseas investment is essential for increasing the sales of goods made by British-owned companies; the information needed to establish the truth of both statements was all in the Interim Report. I must however apologise for not realising that the second topic was a subject of so much interest, and so failing to set the matter out properly: the fact that overseas investment enables British companies, or groups, to be much larger than they otherwise would be is highly interesting in itself, but it was not explored, because the Interim Report concentrated so largely on balance of payments effects. Those students of company motivation who attach great importance to 'growth' as an objective will perhaps regard this point as largely explaining why the companies concerned attach so much importance to securing favourable conditions for overseas investment.

Perhaps I may conclude this section by explaining that the Interim Report took heed of other influences of overseas production on the balance of payments, besides the continuing effect on merchandise exports: the profits earned from overseas production were of course included in the picture, and estimates were made for the 'initial' effects on U.K. exports of machinery, etc., caused by expansion of overseas facilities, as well as for the continuing effect on U.K. sales of services.

## B. A More Refined Presentation

In one respect the picture given in Table XV.1 is seriously over-simplified: it is a convenient method of starting the exposition, but it does not really conform to our basic approach, and for that reason no effort was made to include in it the rough figures for sales in the U.K. which are now available from supplementary enquiries undertaken in preparing Part V.

The trouble is that in Table XV.1 the 'alternative position' is portrayed as one in which the U.K. manufacturers have no overseas production at all, whereas our analysis was basically directed to studying the effects of relatively modest changes of a 'less or more' kind, rather than 'all or none'. (See in particular the discussion on page 22 of the Interim Report.) A position in which a company had no overseas investments would be so different from its existing position – in which it is often producing half its output overseas – that the methods which we used for assessing the consequences of the change would have broken down.

A more justifiable way of portraying the comparison is to postulate that the capital used overseas would be reduced by (say) 10 per cent with 10 per cent less overseas production. Such a picture can be legitimately related to our estimating procedure, as explained on page 22 of the Interim Report and described in more detail in Appendix E. This was to take each subsidiary in turn, and to assess the effects of its not having been established, with all the rest remaining unaffected; each change could thus be regarded as a 'marginal' one in comparison with the company's whole business, and in taking this 10 per cent cut for the overseas business as a whole we are in effect assuming the change to be 'the average of various possible marginals'. The effects on U.K. exports per £100 of operating assets overseas naturally come out as before.

A more refined picture on these lines is shown in Table XV.2, but for convenience of exposition we assumed a reduction in assets overseas of a round £100 million (about 9.3 per cent) rather than a round percentage. This table also rounds off the picture by including some very rough figures for sales in the U.K., suitably adjusted, and also a row for net operating assets overseas.

Naturally, these figures do not have the same sensational look as the ones in Table XV.1, but the basic conclusions are the same. The main 'continuing effects' of an overseas investment of £100 million by U.K. manufacturers are as follows:–

(a) A very small gain in U.K. goods exported of about £1 million a year.

(b) Total sales abroad by British-owned companies up by some £143 million.

(c) Total sales by the British companies up by some 3.6 per cent.

Table XV.2. A more sophisticated version of Table XV.1

(Annual averages, 1955 – 64; £ million; overseas figures relate to 15 countries)

| | Actual | Alternative position[a] | Effects of overseas production |
|---|---|---|---|
| U.K. Exports (f.o.b.): | | | |
| Input items, sold to subsidiary | 51 | 46 | + 5 |
| Input items, sold to alternative producer | 0 | 1 | – 1 |
| Finished goods for resale | 110 | 113 | – 3 |
| Total | 161 | 160 | + 1 |
| Local production | 1,599 | 1,450 | +149 |
| Total sales abroad to outside customers | 1,764 | 1,621 | +143 |
| Sales in U.K. – adjusted[b] | 2,330 | 2,330 | 0 |
| Total sales | 4,094 | 3,951 | +143 |
| Net operating assets overseas | 1,075 | 975 | +100 |

Definitions as for Table XV.1; 50 per cent has again been added to the f.o.b. value of goods for outside customers in estimating sales.

[a] Net operating assets overseas are now assumed to be £100 million below actual.

[b] As the object of including these figures is to show the relative importance of home and export sales, the basic estimates have been reduced by 20 per cent, to allow for the fact that the exports relate only to the 15 specified countries.

The last point may seem to be rather small beer after the earlier picture had shown an increase of 60 per cent in the size of the manufacturing companies, considered as world-wide organisations. That rise however was essentially a static comparison between the present position and one which might have emerged if our economic history had been quite different for the last fifty years or so. The more modest change now envisaged is the sort of thing which can be related to fairly realistic medium-term planning by a company: 'over the next few years, shall we aim at building up our oversea productive facilities from the present capacity of

£16 million per annum to one of £20 million per annum or only to £18 million per annum (i.e. 10 per cent less)?' The enthusiasts for growth as a prime objective of company decisions can find plenty to interest them in this sort of comparison.

# XVI Effects of Overseas Investment in Different Countries

The analysis given in Part III of the Interim Report set out the main figures for the effects on the balance of payments, and gave separate sets for each of the industries followed by the parent companies. It did not, however (as explained in the footnote on page 121), consider the important question of inter-country variations, for reasons which sprang essentially from the way in which the data had been summarised; the basic object of this chapter is to remedy this deficiency, since the country figures are of very considerable interest.

As it happens, it is not exactly a case of going over the old ground again with a different sub-division, since we are now able to include the figures for plantations in the total, as well as the 'late arrivals' from the other industries. We have also given two basic tables, one of which is for the field as a whole, whilst the other is confined to subsidiaries of manufacturing companies. Both tables have obvious uses: one clearly wants to see the over-all results, but at the same time it is interesting to see the picture without the inclusion of mining and plantations, the establishment of which is clearly dependent on natural resources; very roughly, one can say that the manufacturing companies could have set up a subsidiary in any country, so far as the physical possibilities are concerned. The delay does, therefore, have minor compensations in the shape of a fuller picture on which to comment.

## A. Main Statistical Results

Table XVI.1 gives, then, the 'country' results for the whole sample, in the same form as was adopted for the industry analysis in Table XIV.1, but with the addition of a column giving the addition to net operating assets in the nine-year period (to indicate the relative amounts of investment done in the various countries). It may be useful to remind the reader briefly of the salient points of definition:

(a) The whole table relates to the effects of adding £100 to the net operating assets of overseas subsidiaries etc. operating in the country in question; these 'effects' represent 'the differences as compared with the alternative position', in which the £100 would have been added to the assets of a non-British enterprise.

(b) The first column shows the initial or once-for-all effect on U.K. exports caused by making the investment – essentially extra exports of machinery etc.

Table XVI.1. Effects of increase in net operating assets of £100: whole sample

(£)

| Country | Initial effect on exports (1) | Continuing effects |  |  | 9–year addition to net operating assets, 1956-64 (£ million) |
|---|---|---|---|---|---|
|  |  | Profits after overseas tax (2) | Profits plus capital appreciation (3) | Additional exports of goods and services from the U.K. (4) |  |
| Jamaica | 27 | 7.9 | 6.2 | 9½ | 7.0 |
| Ghana | –[a] | 12.9 | 12.3 | 8½ | 3.5 |
| South Africa | 18 | 10.0 | 19.0 | 7 | 53.0 |
| Nigeria | 39 | 4.5 | 5.6 | 5 | 14.6 |
| Malaysia | 35 | 18.8 | 26.9 | 4 | 27.5 |
| Denmark | 15 | 4.8 | 4.5 | 4 | 6.3 |
| India | 20 | 7.9 | 7.9 | 3½ | 84.2 |
| Germany | 2 | 22.6 | 34.3 | 3½ | 44.8 |
| Argentina | 14 | 2.0 | 6.2 | 1½ | 14.9 |
| Australia | 8 | 8.5 | 16.0 | 1 | 201.2 |
| Canada | 4 | 5.3 | 4.7 | ½ | 267.7 |
| U.S.A. | 1 | 9.0 | 11.6 | –1 | 133.3 |
| Brazil | 11 | 6.1 | 10.5 | –1 | 8.9 |
| France | 1 | 3.0 | –1.3 | –5 | 17.3 |
| Italy | 10 | 15.1 | 20.0 | –9 | 8.0 |
| Total, 15 countries | 9 | 8.4 | 11.4 | 1½ | 892.3 |

[a] Our system for estimating the initial effect of overseas investment – see pages 89 – 90 – does not give a meaningful answer in the case of Ghana, largely because of the disinvestment which took place (see Chapter XVIII for a discussion of this point). It is clear however that the initial effect was large in cases of positive investment.

For other notes, see Table XIV.1 (reproduced in Appendix H, page 374); the final column is given as a guide to the relative importance of investment in the various countries.

(c) The next three columns relate to the continuing effects in an average year of the enterprise's subsequent history.

(d) Profits are calculated on normal accounting principles, based on historical cost: they are related to the net operating assets.

(e) The fourth column gives the effect on U.K. exports of goods and services (the services component being inevitably incomplete); the goods item covers both input items for use in overseas factories etc., and goods for re-sale.

The countries have been arranged in descending order of the continuing effects on

U.K. exports, because this helps to reveal interesting economic results. It will be seen, for example, that all the clearly 'less developed' countries come in the top half of the table, and all the highly developed ones come in the bottom half: indeed, one could go further and say that the order in the table was not far off the order in which one might place the countries on the basis of their degree of industrialisation, with the intermediate cases – such as India, Argentina and Australia – falling neatly into the middle. There are of course some divergencies: South Africa and Germany are higher than they should be on this criterion, Brazil and Italy rather lower, but the broad picture is unmistakable.

This conclusion was indeed reached in the Interim Report (pages 109, 110) on the basis of the more limited figures which recorded only the *direction* (favourable or unfavourable) of the effect on U.K. exports for each company's operations in the country in question. There are inevitably some differences in the ordering of the countries now that the quantitative effects have been introduced, but the general picture is very much the same.

It is also interesting to note that there is some tendency for the results to *look* less favourable to U.K. exports in this more accurate form: thus Canada and Australia both show a very small favourable effect in Table XVI.1, although the proportions of individual subsidiaries showing a favourable effect were 67 per cent and 74 per cent respectively. The explanation is that big subsidiaries tend to be ones with a manufacturing business which includes the production of the necessary components etc., and one or two negative figures for such businesses offset the favourable figures from a much larger number of small ones.

The reason why the less developed countries show a favourable effect is basically that so many of the enterprises established there are either of the assembly type, or at least buy a substantial part of their input requirements from abroad, because these are not yet being made in that country. At the other extreme, the highly industrialised countries usually produce all the main input items – and often make their import unattractive by means of tariffs – and in many cases the British subsidiary finds it profitable to make them itself.

If one looks at the initial effect on U.K. exports one finds – not surprisingly – that the picture is much the same: the ordering of the countries is not identical on this basis, but again all the under-developed countries are in the top half, and all the most industrialised in the bottom one. The basic explanation in this case is that subsidiaries in the industrialised countries buy most of the machinery which they require locally – being often pushed in that direction by tariffs – whilst the less developed countries have to import nearly all of it.

It is interesting to see that the initial effects for U.S.A., France and Germany are only 1 or 2 per cent, against 20 per cent or more for all the countries normally classified as under-developed, except the two in South America – which very dubiously belong in that category, and certainly have much more of an engineering industry than Nigeria or even India. The reason why the percentages are not even higher for under-developed countries is essentially the fact that expansion requires local expenditure on buildings, civil engineering work and *installation* of machinery.

### Profits

The profit figures can almost be left to speak for themselves. There is no simple principle whereby profits either rise or fall with the extent to which a country is 'developed': this point is neatly symbolised by the fact that Germany is at the top of the list and France is bottom but one. Nor is it true to say that the the sterling area countries systematically show either high or low profits: four of them are above the average, and three below – whether or not one includes capital appreciation with ordinary profits.

This last point is of some theoretical interest. Throughout the post-war period the operations of our exchange control have usually made it easier for British companies to invest in sterling area countries than elsewhere, and it has sometimes been said that this easier access would lead to lower profits being earned there. The fact that this is not so might be explained by many factors, including the sheer uncertainty of any business venture (which would largely defeat any attempt by the Control to permit 'only the most profitable' ventures outside the sterling area) and the desire of manufacturers to expand their operations at whatever pace the market for their products was growing (without too nice a regard to profit prospects). But perhaps it would be legitimate to see in it some justification for our assumption about an alternative producer stepping in when (or if) a British subsidiary did not expand: in so far as expansion in (or access to) non-sterling countries was made difficult for British subsidiaries, the result was not a scarcity level of profits for such investment as was permitted, but expansion by other companies.

One further point is perhaps worth making. There is no real tendency for countries with high profit figures to show low figures for effects on exports and vice versa. There is thus no repetition on a country basis of the point noted on page 128, whereby the *three industries* with the worst profit figures showed the biggest gains in exports.

## B. Overseas Taxation

A slight digression is of considerable interest at this point. For assessing the effects on the U.K. we are interested primarily in the figures for profits *after overseas tax*, but for other purposes the U.K. has a secondary interest in the benefit to the local governments which this tax revenue brings, especially in under-developed countries – a matter which we shall be considering further in Chapter XXIII. Moreover there are many other questions which it is interesting to study for their own sake, especially in view of the varying taxation policies adopted in different countries: how large a proportion of the pre-tax profits went to the local government in each of the various countries? In which ones did this tax revenue represent a high return on the assets involved? Is a high post-tax return to the owners incompatible with a high percentage of taxation to profits, or are the high taxes simply passed on?

We do not have enough material to answer all these questions fully, but Table XVI.2 provides some material which may be useful. We have had to work in terms

Table XVI.2. Overseas direct taxes and profitability

(Annual averages)

| Country | Pre-tax profits [a] | Overseas Direct taxes | Share of tax in profits [a] | Pre-tax Profitability [a] | Post-tax Profitability [a] | Taxation as percentage of capital [a] |
|---|---|---|---|---|---|---|
| | £'000 | £'000 | % | % | % | % |
| Denmark | 359 | 93 | 25.9 | 6.5 | 4.8 | 1.7 |
| South Africa | 13,785 | 4,243 | 30.8 | 14.8 | 10.3 | 4.6 |
| Malaysia | 15,595 | 5,370 | 34.4 | 28.7 | 18.8 | 9.9 |
| Jamaica | 937 | 326 | 34.8 | 13.3 | 8.7 | 4.6 |
| Nigeria | 3,858 | 1,601 | 41.5 | 7.7 | 4.5 | 3.2 |
| Australia | 28,284 | 11,766 | 41.6 | 15.6 | 9.1 | 6.5 |
| Italy | 2,150 | 971 | 45.2 | 32.8 | 18.0 | 14.8 |
| Canada | 22,915 | 10,474 | 45.7 | 10.8 | 5.9 | 4.9 |
| U.S.A. | 36,178 | 17,111 | 47.3 | 16.1 | 8.5 | 7.6 |
| Ghana | 6,464 | 3,244 | 50.2 | 26.0 | 12.9 | 13.0 |
| Germany | 14,064 | 7,461 | 53.1 | 50.4 | 23.7 | 26.7 |
| India | 26,955 | 14,910 | 55.3 | 18.3 | 8.2 | 10.1 |
| Brazil | 4,591 | 2,933 | 63.9 | 16.9 | 6.1 | 10.8 |
| France | 1,473 | 1,018 | 69.1 | 7.5 | 2.3 | 5.2 |
| Argentina | 1,076 | 789 | 73.3 | 7.5 | 2.0 | 5.5 |
| Total, 15 countries | 178,684 | 82,308 | 46.1 | 16.3 | 8.8 | 7.5 |

[a] Profits are shown after deducting interest on non-current liabilities but include profits attributable to minority interests; the 'capital' figure to which they are related is net operating assets, less non-current liabilities.

of profits after deducting interest on debentures and other non-current liabilities, because we do not know what tax may have been collected from the recipients, or even whether anything was deducted at source: but this item is a small one, and the capital figures correspondingly exclude these obligations, so that most of the percentages would be virtually unchanged if a wider basis were used.

It will be seen that the percentage of profits taken in overseas taxation averaged 46 per cent. As between countries it varies from 26 per cent in Denmark and 31 per cent in South Africa to 69 per cent in France and 73 per cent in Argentina: the French figure is raised by the subtraction of losses in arriving at the profits figure, and the percentage for Argentina is raised by the adjustment which we made to the profits figures to eliminate the influence of its large inflation (see Appendix D). In general, it must be remembered that the proportion taken in taxation reflects all the special features of the companies' position – concessions to attract overseas capital, devaluations, special arrangements for mines, withholding taxes, etc.

As the countries are arranged in ascending order of the above percentage it is easy to see its relationship with any other item – e.g. post-tax profitability to the owners – by looking at the pattern of the figures in the relevant column. It is apparent that there is some tendency – but not very much – for the countries with a high taxation percentage to show a *high* percentage for pre-tax profits and a *low* one for post-tax profits. This is conveniently summarised, on the basis of unweighted averages, in Table XVI.3.

Table XVI.3. Profitability in high-tax and low-tax countries

(Annual averages; percentages)

| | Average pre-tax profitability | Average post-tax profitability |
|---|---|---|
| 7 low-tax countries | 17.1 | 10.6 |
| 7 high-tax countries | 20.4 | 9.1 |
| Difference | –3.3 | +1.5 |
| Difference as % of mean of all 14 | –17.6% | +15.2% |

With such a small sample of countries it is dangerous to draw firm conclusions, but this picture is one which is inherently plausible. Its implication is that pre-tax profit rates tend to be raised somewhat in countries which impose high taxes – though there are clearly other powerful factors which affect the outcome and so produce big variations between the individual countries in each group. These higher profit rates do not, however, fully compensate for the higher taxes, even on the average, so that post-tax rates are lower in highly taxed countries. For what it is worth, the further conclusion is that the passing-on of the high taxes about half-compensates for their above-average height, since the proportionate difference between the two groups of countries is much the same in the two columns: indeed, if one uses medians instead of unweighted averages – which is perhaps safer – the proportionate differences are almost identical, but that is clearly a coincidence.

The final column of Table XVI.2 tells us how much direct tax revenue the government of the country concerned receives for every £100 of capital assets which is operating in the British subsidiaries included in our sample. This is a figure which we have not used before, and it is interesting to see that the (weighted) average is £7.5. As the countries with high taxes also show above-average profits, it is inevitable that this column shows a tendency for the figures to rise as you go down it – though again there are plenty of other factors to prevent the progression from being at all regular. The average figure for the low-tax group is £6.5, and for the high-tax group £11.3.

It is perhaps as well to conclude this section by emphasising that these figures do not provide a good measure of the relative benefit to the countries concerned. Where high profits are a reflection of high prices charged by a highly taxed monopolist operating behind a high tariff, the government's gain is often the local consumer's loss.

## C. Subsidiaries of Manufacturers

Reverting to the main theme of this chapter, Table XVI.4 follows the pattern of Table XVI.1, but is confined to subsidiaries etc. of manufacturing companies,

Table XVI.4 Effects of increase in net operating assets of £100: subsidiaries of manufacturing companies

(£)

| Country | Initial effect on exports (1) | Continuing effects | | | 9-year addition to net operating assets, 1956–64 (£ million) |
|---|---|---|---|---|---|
| | | Profits after overseas tax (2) | Profits plus capital appreciation (3) | Additional exports of goods and services from the U.K. (4) | |
| Jamaica | 27 | 7.9 | 6.2 | 9½ | 7.0 |
| Malaysia | 31 | 17.9 | 20.6 | 8½ | 13.5 |
| South Africa | 27 | 10.2 | 17.6 | 7 | —[b] |
| Ghana | —[a] | 8.7 | 10.2 | 7 | —[b] |
| India | 21 | 9.0 | 11.2 | 6 | 70.8 |
| Nigeria | 35 | 4.0 | 5.3 | 5 | —[b] |
| Denmark | 15 | 4.8 | 4.5 | 4 | 6.3 |
| Germany | 2 | 22.6 | 34.3 | 3½ | —[b] |
| Argentina | 14 | 2.2 | 6.5 | 1½ | —[b] |
| Australia | 9 | 7.9 | 13.0 | 1 | 172.2 |
| Canada | 6 | 5.1 | 4.2 | ½ | —[b] |
| Brazil | 11 | 6.1 | 10.5 | −1 | 8.9 |
| U.S.A. | 1 | 9.4 | 13.2 | −1½ | 103.4 |
| France | 1 | 2.9 | −1.6 | −5 | —[b] |
| Italy | 10 | 15.1 | 20.0 | −9 | 8.0 |
| Total, 15 countries | 10 | 8.0 | 10.8 | 1½ | 722.6 |

[a] See note to Table XVI.1.

[b] These figures cannot be given for reasons of confidentiality.

For other notes, see Table XIV.1, (reproduced in Appendix H, page 374).

omitting mines and plantations. For some countries the figures are of course identical, because these activities do not exist there, but even in some other countries it is surprising to find how small the differences are. In the extreme case of Malaysia, for example, both tin and rubber are important, and manufacturing represents little over one-quarter of the assets involved; yet the profits figure is not much changed (17.9 per cent, against 18.8), whilst the two figures for effects on exports – though significantly changed – have moved in opposite directions. The figures for India, however, are all more attractive from the British point of view when one considers manufacturing only.

In general, therefore, this table can be left to speak for itself, with a presumption that anything which it says will bear a strong relationship to the contents of the other two sections.

Finally, it may be useful to conclude this ‘country’ study by recalling our analysis of the inter-country relationships between growth and profitability for the manufacturing field, which was given on pages 45–6 of the Interim Report (and brought up to date in the revised version of Table IV.6, on page 358). This showed a remarkable absence of any correlation between profitability and growth in the various countries, whether growth was taken as an absolute figure (which is what most affects the U.K. national interest, since it is advantageous to have the largest sums invested in the most profitable countries) or as a proportion of the initial assets (which is most relevant for a study of company behaviour). Such an absence of correlation seems to us to be primarily explicable in terms of the factors mentioned above: the inherent difficulty of predicting profitability, and the importance of motives for expansion other than predicted profitability as such. Amongst these other motives the outstanding explanation given to us was the desire of the manufacturer to meet the expanding demand for his products, even if that demand is in a market in which he is in hot competition with sellers of rival products, and so unable to earn big profits.

# XVII Age of Investment and Profitability

One of the fundamental difficulties about assessing the effects of overseas investment is that these effects are spread over a long period of time: moreover it is very rare for a single act of investment to be the sole cause of any set of results, because subsequent additions are so frequently made to it as part of a development process. The nature of these complications was discussed on pages 24–6, emphasising that it is logically impossible to arrive at a really satisfactory answer except in those cases where an enterprise has been brought to its final and definitive closure – which means that the process cannot be applied to nearly all the interesting cases, and will be very out-of-date when it can be applied: the conventions of accountancy do not enable one to give proper assessment to the success or otherwise of a going concern, and any other device – such as the use of Stock Exchange values to measure capital appreciation – must always have its logical weakness, as well as presenting statistical problems.[1] One can, however, produce results which are of real value, so long as one remembers their limitations.

It was mainly the statistical difficulty of arriving at results for the different years of a typical venture which forced us to concentrate attention in the Interim Report on giving figures for an 'average year' of its life-time, and to derive that average by a method which broadly met the main requirements but which was open to some logical objections.[2] The object of this chapter is to give the results of further research, which was aimed at improving this position: the results are interesting in themselves, but in point of fact they leave us with a feeling that the method previously adopted is the best – indeed, they strengthen the justification for using that simple approach.

In the first section we look at the relatively few cases (only thirty-eight in all) where our returns enable us to distinguish the results of a new venture by a parent company in a particular country, which started within our period and had sufficient years' experience to give some usable results: this analysis throws direct light on the 'initial years' results' in new ventures (including cases where the parent bought an existing enterprise), but it does not, of course, throw any light at all on the initial results of investment in the expansion of subsidiaries already owned in 1955 – which absorbed a much larger amount of capital.

The second section analyses the profitability of the various subsidiaries according to a rough indicator of their effective age. This was designed to show broadly whether profitability follows any clear-cut path according to age; the fact that the analysis revealed no such pattern (apart from low profits in the first years) led to our acceptance of the 'average year' approach as giving virtually all the useful information of a general kind which we could derive.

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[1] See in particular the footnote on page 26.

[2] See pages 87–8, especially points (d) and (e).

## A. New Ventures

It is useful to start off by getting some idea of the quantitative importance of new ventures in relation to the other ways in which total net operating assets grew between 1955 and 1964: the key figures are given in Table XVII.1. New ventures have been split between activities which genuinely were started from nothing ('green field'), and those which took the form of buying a controlling interest in existing assets. Taking both types together, new ventures accounted for some 20 per cent of the total growth in net assets in the nine-year period.

Table XVII.1. Growth of net operating assets in the fifteen countries

| | | £ million |
|---|---|---|
| Net operating assets in 1955 | | 857 |
| *Less* | | |
| Subsidiaries that were subsequently disposed of | −8 | |
| *Plus* | | |
| Growth of other subsidiaries existing in 1955 | 725 | |
| Going concerns purchased: | | |
| Initial net operating assets | 49 | |
| Subsequent growth | 28 | |
| Growth of green field ventures | 98 | |
| Net growth, excluding revaluations | | 892 |
| *Plus* Revaluations | | 25 |
| Net operating assets in 1964 | | 1,774 |

The subsidiaries that existed throughout the period grew at compound rate of 7 per cent a year, excluding the effect of revaluations: those bought as going concerns increased their assets at an average of 9 per cent a year during their first four years of U.K. ownership. For green field ventures it is difficult to quote a corresponding figure with any meaning, but, as some guide, those for which we have at least eight years' figures grew at an annual rate of 11 per cent between their fourth and eighth year of existence.

### Profitability

The most interesting thing to examine for the new venture is the course of its profitability year by year from starting up, and Tables XVII.2, XVII.3 and XVII.4 show this. Each table combines the results for a number of new subsidiaries, without regard to the actual year in which they were started, by treating as starting-point (or 'year 0') for each one of them the year in which fixed assets appear for the first time in our records. Profitability is calculated by relating a year's profits to the *average* of the net assets at the beginning and end of the year.

Clearly the longer the runs of years we wish to look at the smaller will be the available number of subsidiaries. The '38 cases' of Table XVII.2 include the '12 cases' of Table XVII.3.

Table XVII.2. Profitability of green field ventures in existence for at least five years

(38 cases)

| | Year of operation | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| Net operating assets at year-end – £'000 | 9,208 | 29,307 | 50,671 | 62,999 | 62,800 |
| Pre-tax profits – £'000 | 132 | 244 | 58 | 107 | 1,584 |
| Profitability – % of average net assets for the year | 2.9 | 1.3 | 1.0 | 0.2 | 2.5 |

Table XVII.3. Profitability of green field ventures in existence for at least eight years

(12 cases)

| | Year of operation | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Net operating assets at year-end – £'000 | 1,267 | 10,035 | 25,195 | 33,901 | 33,364 | 33,694 | 38,627 | 52,412 |
| Pre-tax profits – £'000 | –8 | 62 | 66 | –249 | 874 | 965 | 2,272 | 1,226 |
| Profitability – % of average net assets for the year | –1.3 | 1.1 | 0.4 | –0.8 | 2.6 | 2.9 | 6.3 | 2.7 |

The picture that emerges from these tables more or less speaks for itself. The going concerns show a rate of profit broadly similar to that of the original subsidiaries, whilst green field ventures (in total) show virtually no profit after four years and very little after eight.

In order to get behind these totals a bit, Table XVII.5 gives a breakdown between developed and under-developed countries. (A full industry or country breakdown

Table XVII.4. Profitability of purchased going concerns owned for at least five years

(11 cases)

| | Year of operation (as subsidiary of U.K. company) | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| Net operating assets at year-end – £'000 | 49,016 | 53,516 | 55,971 | 59,153 | 70,818 |
| Pre-tax profits – £'000 | 2,921 | 6,340 | 6,927 | 6,149 | 9,771 |
| Profitability – % of average net assets for year | 11.9 | 12.4 | 12.7 | 10.7 | 15.0 |

would not be very useful, as the classes would become extremely small.) Profitability is defined in the same way as in Tables XVII.2–4. The contrast is quite striking. After five years, the ventures in the developed countries are still showing a cumulative loss while those in the under-developed appear to have achieved a nearly normal profit rate. It is clear that the average venture in an under-developed country is a more modest affair, and presumably realises its earning potential sooner, than that in a developed country. However, the figures in this table (and to a lesser extent those in the earlier ones) are very much affected by the results of a handful of subsidiaries.

Table XVII.5. Profitability of green field ventures in existence for at least five years

| | Year of operation | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| *Developed countries* (21 cases) | | | | | |
| Net operating assets at year-end – £'000 | 5,164 | 24,229 | 44,533 | 54,893 | 53,487 |
| Pre-tax profits – £'000 | –36 | 201 | 140 | –782 | 435 |
| Profitability – % of average net assets for year | –1.4 | 1.4 | 0.4 | –1.6 | 0.8 |
| *Under-developed countries* (17 cases) | | | | | |
| Net operating assets at year-end – £'000 | 4,044 | 5,078 | 6,188 | 8,106 | 9,313 |
| Pre-tax profits – £'000 | 168 | 43 | –82 | 889 | 1,149 |
| Profitability – % of average net assets for year | 8.3 | 0.9 | –1.5 | 12.5 | 13.2 |

## Capital Appreciation

Is the low profitability of green field ventures in their early years compensated for by high capital appreciation, reflecting the as yet unrealised earnings potential? An attempt was made to answer this question, on the assumption that for each subsidiary capital appreciation between start-up and 1964 should be allocated to the initial years on a *pro-rata* basis. The results are given in Table XVII.6. As might have been expected, capital appreciation is important especially for the eight-year subsidiaries, but the 'combined return' would still be substantially less than that of continuing subsidiaries.

Table XVII.6. Profitability and capital appreciation of green field ventures (Annual averages, £'000)

| | 38 '5-year' subsidiaries | 12 '8-year' subsidiaries |
|---|---|---|
| 1. Net operating assets | 36,717 | 25,273 |
| 2. Pre-tax profits | 425 | 651 |
| 3. Capital appreciation on U.K. stake | 287 | 1,656 |
| 2 as % of 1 | 1.2 | 2.6 |
| 3 as % of 1 | 0.8 | 6.6 |

## Initial Imports from U.K.

The other interesting thing to look at for new ventures is the extent of capital equipment purchases from the U.K. to set them up, and Table XVII.7 does this. As this table does not need to show individual years' figures, the returns of all seventy-two new ventures in our population have been used in its compilation, and the figures for 'growth' therefore tie up with those in Table XVII.1.

Table XVII.7. Capital equipment purchases from the U.K. by new ventures

| | | 58 green field ventures | 14 going concerns |
|---|---|---|---|
| Growth of net operating assets | – £'000 | 97,759 | 28,155 |
| Capital equipment purchases from U.K. | – £'000 | 16,755 | 3,516 |
| Purchases per £100 increase in net operating assets | – £ | 17.1 | 12.5 |

The period covered for each subsidiary begins with the first date for which it had a balance-sheet, and ends with end-1964.

The results are not at all unexpected. For the going concerns, the ratio of purchases to growth of net assets *while in U.K. ownership* is almost exactly that of the sample as a whole, and would give an 'effect on U.K. exports' of about £9 per £100 on the sort of average allowances employed in assessing the 'alternative position'; there are, however, naturally no purchases from the U.K. to correspond with the investment made in taking over the enterprise initially – in this respect the position is a sort of mirror-image of the cases of disinvestment, by sale of a subsidiary, discussed in the next chapter.

Green field ventures made significantly higher purchases, and could be expected to have had an effect on U.K. exports of some £12½ per £100; perhaps the influence of the parent company in leading the subsidiary to use British equipment is stronger in the initial years of a green field venture than it becomes with a long-established local Board.

## B. Profitability According to Age

For this part of the analysis we took as our accounting unit the activities of a parent company in each of the fifteen countries where it had one (or more) subsidiaries or branches, but we confined the field to the subsidiaries etc. of parents which we classified as manufacturing (because the book-keeping procedures of mines and plantations are liable to represent rather different concepts of what to treat as capital assets or expenditure): this gave us a total of 285 units.

As our indicator of effective age (or rather 'youth') of the capital invested in each unit we took the increase in the net operating assets during the period 1955 – 64 (adjusted for revaluations) as a percentage of the final figure. This works quite well for those cases where the proportion is high: the new ventures analysed in the previous section all rate as 100 per cent, and in those units where the figure comes to 90, 80, 70 or 60 per cent the capital is clearly all 'mainly young' – though they might have been founded many decades ago.[1] Moreover there is a fair presumption that the average age of the capital in each of these classes will be older than that in the ones which went before, though there may be individual exceptions where (for example) the remaining capital of a '60 per cent company' had all been invested since 1950, but that of a 70 per cent company was much older.

When the percentages fall to 50 per cent or less the indicator is not so reliable as

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[1] It must be remembered that fixed assets are included at their depreciated value: a unit which has bought quite a lot of new fixed assets in the nine years will still get a figure of 0 per cent if these do no more than off-set depreciation (minus any increase in net current assets). The formula is simply

$$\frac{\text{net operating assets in 1964 minus ditto in 1955}}{\text{net operating assets in 1964}}$$

On such a formula, an enterprise must have doubled (in terms of net assets) in nine years to attain a figure of 50 per cent on our indicator.

a guide to effective age, (though still better than nothing), because we know nothing about the date when over half the capital was invested; in the awkward cases where the subsidiary has reduced its assets during the nine years we have no real guide to age except that it is over ten years, but these have been left in the table, because such cases are of some interest in themselves. (Understandably, they show low profits.)

## The Main Results

Table XVII.8 gives the results for the whole manufacturing field, and Table XVII.9 gives the same set of figures for the four industries which were expanding

Table XVII.8. Profitability and 'age': A. All subsidiaries of manufacturing companies in the fifteen countries

| Proportion of net operating assets added[a] between 1955 and 1964 | Number of 'cases'[b] | Pre-tax profits | Net operating assets | Profitability |
|---|---|---|---|---|
| % | | (Annual averages: £m.) | | % |
| 100 | 69 | 4.5 | 63.5 | 7.1 |
| 90.0 to 99.9 | 14 | 2.3 | 16.1 | 14.0 |
| 80.0 to 89.9 | 11 | 17.1 | 92.3 | 18.5 |
| 70.0 to 79.9 | 10 | 4.0 | 24.8 | 16.2 |
| 60.0 to 69.9 | 29 | 15.0 | 114.7 | 13.1 |
| 50.0 to 59.9 | 38 | 27.8 | 133.8 | 20.8 |
| 40.0 to 49.9 | 17 | 11.8 | 83.5 | 14.2 |
| 30.0 to 39.9 | 15 | 27.5 | 172.8 | 15.9 |
| 20.0 to 29.9 | 21 | 17.8 | 123.7 | 14.4 |
| 10.0 to 19.9 | 7 | 3.7 | 26.0 | 14.3 |
| 0.0 to 9.9 | 16 | 9.3 | 82.0 | 11.3 |
| Total: subsidiaries that expanded | 247 | 140.8 | 932.2 | 15.1 |
| Subsidiaries that contracted or closed | 41 | 10.2 | 142.5 | 7.2 |
| Grand total | 288 | 150.9 | 1074.6 | 14.0 |

*Notes*: a $\frac{\text{Change* in net operating assets, 1955–1964}}{\text{Net operating assets, 1964}}$

* Excluding the effect of revaluations.

b A 'case' refers to a subsidiary or collection of subsidiaries reported (on Form 1) by a particular U.K. group in a particular country.

most rapidly: the indicator works best for such industries, and we thought that a table confined to a rather more homogeneous field might reveal something which was hidden in the general one.

Table XVII.9. Profitability and 'age'

B. Four 'growth' industries*

| Proportion of net operating assets added[a] between 1955 and 1964 | Number of 'cases'[b] | Pre-tax profits | Net operating assets | Profitability |
|---|---|---|---|---|
| % | | (Annual averages: £ m.) | | % |
| 100 | 34 | 3.6 | 55.0 | 6.5 |
| 90.0 to 99.9 | 5 | 0.6 | 4.1 | 14.6 |
| 80.0 to 89.9 | 5 | 5.5 | 66.1 | 8.3 |
| 70.0 to 79.9 | 3 | 1.9 | 11.2 | 17.0 |
| 60.0 to 69.9 | 13 | 10.4 | 88.2 | 11.8 |
| 50.0 to 59.9 | 14 | 14.3 | 61.7 | 23.2 |
| 40.0 to 49.9 | 7 | 5.1 | 28.1 | 18.1 |
| 30.0 to 39.9 | 4 | 2.6 | 17.0 | 15.3 |
| 20.0 to 29.9 | 3 | 5.0 | 55.9 | 8.9 |
| 10.0 to 19.9 | 1 | 0.9 | 6.0 | 15.0 |
| 0.0 to 9.9 | 2 | 0.5 | 5.5 | 9.1 |
| Total: subsidiaries that expanded | 91 | 50.3 | 398.8 | 12.6 |
| Subsidiaries that contracted or closed | 12 | 2.7 | 43.8 | 6.2 |
| Grand total | 103 | 53.0 | 442.6 | 12.0 |

* Metals and Metal Products, Paper, Vehicles and Components, Building Materials.

For other notes, see Table XVII.8.

These tables are of considerable interest in themselves. The comprehensive one shows for example that, in 1964, 46 per cent of the net operating assets was in subsidiaries which had at least doubled in size in the last nine years, and for the fast-growing industries this proportion was as high as 65 per cent. If we take a five-fold expansion of net operating assets as constituting 'growth out of all recognition', then we can say that 18 per cent of the net assets in 1964 was in subsidiaries which merited that designation (28 per cent for the expanding industries).

So far as their main purpose is concerned, however, the story which the tables tell is a simple negative: they reveal no meaningful relationship between the age of an investment and its profitability, apart from the low initial profitability discussed in the previous section. This does not exclude the possibility that more sophisticated analysis might reveal some rather weak relationships, especially if more elaborate data were collected; but from our point of view it is clear that there would be no sense in trying to devise a complicated 'time story' to represent the continuing effects of overseas investment, in place of the single figure which we have given for an average year.

A negative result to this investigation is by no means without interest. In a general way it was obvious that in some subsidiaries there is a marked upward trend in profitability, and in others we can expect a decline from the high figures established as soon as a novel venture has been properly established, whilst there will also be cases with considerable fluctuations and no real trend. We certainly could not say in advance that on the whole these would combine to give a table with very considerable variations but no trend, though such a result was quite likely: it certainly fits with the stress which we have so often laid on the diversity of results between individual companies.

# XVIII Further Analysis of Effects of Overseas Investment

This chapter is designed to elaborate various ideas introduced in the Interim Report, and more especially in the final chapter of it. The only part which is wholly new is the final section, dealing with the economic effects of selling overseas investments – i.e. 'disinvestment', as opposed to new investment – but it has been apparent, from comments on the Interim Report, that a fuller treatment of certain subjects was desirable. In many cases this elaboration was due to be given in the Final Report anyhow, when time would be less pressing, but I would like to express my gratitude for indications as to points where it was needed.

This chapter deals with points where a fuller set of statistical results is needed. The next two deal with matters on which the model needs fuller justification and discussion, and Chapter XXI gives a fuller account of the statistical methods of estimation, or 'justifies' the procedures used.

## A. 'Effects' Related to U.K. Stake

Throughout the Interim Report, we sought to relate the various effects of overseas operations by subsidiaries of British companies primarily to the size of their net operating assets abroad, rather than to the amount of money which had been invested from this country. The reasons for following this course were explained on page 17, but may be summarised essentially under these headings:—

(a) We defined 'direct investment' as applying to subsidiaries and branches so as to deal with enterprises that are under U.K. control. If one is concerned with the effects of the subsidiary's operations on British exports or imports, it is clearly the *whole* operation of the subsidiary which is relevant to the demand or the supply, rather than some fraction based on the proportion of finance provided by the British parent company. We are *not* concerned with changes in the amount of stake which involve changes in control.

(b) Secondly, we are not concerned solely with the subsidiary's *capital*, but also with the amount of organising effort and so on needed to establish it. For a subsidiary of a given size, this is reflected better in a figure covering the whole of the subsidiary's assets, rather than the amount of capital supplied from the U.K.

(c) More important still, if one is wanting to use past experience as a guide to the future, one should study relationships which are as likely as possible to remain unchanged. Inevitably, it requires an act of faith to assume that, because in the past control over £100 of assets overseas tended to make British

> exports greater than they otherwise would have been by, on average, £1 per year, therefore the same thing will tend to be true in the future. If, however, one calculated the average relationship between £100 of *U.K. stake* in the past and the effect on British exports, then one would need to have a *double* act of faith before assuming the same result to apply in future: for the past relationship would represent the combination of a relatively reliable relationship between operating assets under U.K. control and demand for British exports on the one hand and, on the other hand, a particular system of financing which happened to be adopted in the past, but might easily change in future.[1]

The logic of our procedure was, therefore, that we tried to establish the relationship between the various effects and the size of the net operating assets: we then left it to users to consider the various ways in which the net operating assets might be secured, and to insert into the total picture the costs of securing them in the way which they considered relevant. In general, this is not a very difficult operation, as the next sub-section shows, and I am frankly surprised that so few people seem to have attempted it – either by using the historical figures for the proportion of capital supplied as U.K. stake in the past, or by assuming some proportion which they regarded as likely to apply in the future – perhaps a considerably higher one. Nevertheless it is clear that the Interim Report would have been improved if more had been said about the matter: separate figures were given for the return in the form of profits applicable to U.K. stake, but the subject as a whole was not properly expounded.

What got missed out in that analysis was essentially an intermediate stage, in which people have expressed very considerable interest. In effect Table XIV.1 showed the direct consequences of an expansion of £100 in the net operating assets of British subsidiaries overseas. The Interim Report then jumped straight from that set of statistics – essentially derived from the records of the companies which we had visited and our discussions with them – to estimates of the effects on the national economy, allowing for indirect effects on employment policy, exchange reserves and the like. It would have been much better to have moved first to a consideration of the relationship between the effects observed and the amount of U.K. stake put in by the companies, without bringing in these further repercussions, which could be added later.

## Derivation of Additional Figures

If we use the new figures for manufacturing companies, as given in Appendix H on page 374, we have the outcome for £100 of expansion in net operating assets overseas, as shown on the following page.

This expansion of £100 in net operating assets overseas may be thought of as having involved roughly £60 of addition to U.K. stake, and £40 of additional

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[1] As an extreme example, one might find a particular case where the subsidiaries had been wholly financed by overseas borrowing, perhaps under guarantee, so that the U.K. stake involved was zero. It would not be very helpful to say that the effect upon U.K. exports caused by the subsidiary was to be attributed to an investment of zero.

Effects of addition of £100 to net operating assets

| | |
|---|---|
| *Initial effect on exports from U.K.* | £11 |
| *Profits after overseas tax* (on replacement cost basis, and after deducting stock appreciation) | £5½ p.a. |
| *Additional exports of goods and services from U.K.* | £1½ p.a. |

finance raised abroad (taking the proportions shown in Table XVIII.1 below). If we want to relate the effects to the £60 of additional U.K. stake, we should naturally leave the two export items unaffected, but the profits have to be reduced to allow for the amounts payable to the outside financiers; this would reduce the £5½ to rather over £3. We could then, if we wished, scale the three figures up in the ratio 100 : 60 so as to see the effects, on average, of adding £100 to U.K. stake in the manufacturing field during the period covered by the survey: but these answers would be *entirely dependent on the assumption that £67 – no more and no less – was also raised elsewhere.*

The results of this exercise would then be:–

| | |
|---|---|
| *Initial effect on exports from U.K.* | £18 |
| *Profits after overseas tax* | £5½ p.a. |
| *Additional exports of goods and services from U.K.* | £2 p.a. |

The above figures are undoubtedly of interest as representing the results of a particular historical period, but one must stress the fact that their validity is absolutely dependent on the italicised assumption made above. If foreign governments made it impossible to raise any outside finance abroad, we would have to revert to the earlier set of figures, and say that in future these would apply to U.K. stake also. If, on the other hand, there were a successful policy of raising (say) 80 per cent of the capital abroad, then the effects on exports 'per £100 of U.K. stake' would in future be five times the basic figure – i.e. the initial effect would be £55

With this explanation of how the figures are derived, it is now appropriate to consider Table XVIII.1, which is really a companion to Table XIV.1: thus it shows the effects of an increase of £100 in U.K. stake (rather than in net operating assets), using the crucial assumption that this £100 would be accompanied in each industry by the same amount of outside finance as applied, on average, in the nine years from end-1955 to end-1964.[1] There is of course no unique virtue in this assumption, so far as conjectures about the future are concerned (when of course the other figures might also change): one hesitates for example to attach much importance to the fact that Metals and Metal Products shows a higher initial effect than Non-electrical Engineering, when the figures relating to operating assets were the other way round, and the only reason is that in the past that industry raised more of its finance from outside sources. Those who wish to estimate the figures for some other set of assumptions about outside finance can do so by making use of the column for the percentage of finance supplied by the U.K. group, and applying the following rules for each industry:–

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[1] An interesting technical point arises in relation to the totals for manufacturing, in which the 'adjusted' row shows a lower proportion of financing by the U.K. group than the unadjusted one. The explanation is that when the growth of net assets is calculated on a basis of constant (mid-period) prices, the figure naturally comes out smaller, and the main counterpart on the financing side is a lower figure for 'true' undistributed profits. (See also Chapter XXI, section D.) The lower growth figure raises our assessment of the initial effect on exports.

(a) The two trade effects are found by multiplying the existing figure by the present percentage, and dividing by the one which is to be used instead.

(b) The profit figure will change little, unless the present one is much higher (or lower) than the rate of return which is assumed to be payable on the new outside finance. The method of calculation then follows the ordinary principles used when the amount of 'gearing' is changed for a company.

The main consequence of using a table based on U.K. stake rather than net operating assets is, of course, to increase the figures for the trade effects. For the sample as a whole these still remain relatively modest, at £15 for the initial effect and £2 per year for the continuing one; but the two industries which showed exceptional continuing effects before – Non-electrical Engineering and Vehicles – now stand out even more. As it happens, the figure for Non-electrical Engineering received an above-average lift, because companies in this industry used outside finance on a substantial scale.

## Link with Previous Analysis

Before concluding this section, it is probably wise to show how the above analysis links with what was given on pages 125 – 8 of the Interim Report. As indicated above, Table XIV.1 showed the results from an increase of £100 in net operating assets overseas, without any subtraction for the 'costs' of financing those assets, and without exploring certain indirect effects arising out of our assumption about a full employment policy in the U.K., etc. (as described in Appendix C). The above analysis shows what happens if one brings into the picture the assumption that 40 per cent of the additional operating assets are financed by raising funds overseas, in the sort of way that was adopted by the sample companies in our reference period, but it still does not explore the indirect consequences.

The analysis previously given on pages 125 – 8 endeavoured to bring in the indirect consequences for the British economy of the whole operation of expanding the assets, including the effects of remitting the extra amount of U.K. stake from Britain (or refraining from repatriating a corresponding amount of profits); these calculations also included an allowance for the more complicated indirect effects. So far as the main 'financing' points went, this analysis pointed to the fact that out of the £100 invested in the subsidiaries, only £11 would be contributed in the form of an addition to U.K. net exports (which would, on the internal side, be counterbalanced by a reduction of £11 in internal capital formation), whilst £89 would be contributed by our 'external financial obligations' of one kind or another

Table XVIII.1. Effects of increase in U.K. stake of £100

(£)

| Industry | Initial effect on U.K. exports | Continuing effects | | | 9-year addition to U.K. stake 1956-64$^{ab}$ (£ million) | Percentage of increase in net operating assets financed by U.K. group[a] (%) |
|---|---|---|---|---|---|---|
| | | Profits after overseas tax | Profits plus capital appreciation | Additional exports of goods and services from the U.K. | | |
| | (1) | (2) | (3) | (4) | | |
| Building Materials, etc. | 20 | 13.7 | 19.4 | – ½ | 40.7 | 77 |
| Chemicals | 24 | 8.4 | 18.0 | – 3 | 93.8 | 64 |
| Textiles | 25 | 7.7 | 11.9 | – 1 | 31.4 | 80 |
| Food, Drink, Tobacco, etc. | 8 | 8.8 | 10.6 | 1 | 165.6 | 82 |
| Metals & Metal Products | 23 | 7.4 | 8.6 | – ½ | 80.3 | 44 |
| Vehicles & Components | 30 | 5.0 | 8.5 | 15½ | 64.6 | 68 |
| Paper | 2 | 7.7 | 7.5 | – ½ | 77.8 | 57 |
| Electrical Engineering | 4 | 5.4 | 7.4 | 6 | 26.8 | 59 |
| Non-electrical Engineering | 20 | 4.5 | 4.1 | 32½ | 6.0 | 55 |
| Total Manufacturing | 15 | 8.1 | 11.3 | 2 | 587.0 | 64 |
| *Ditto, adjusted*[c] | *18* | *5½* | *8* | *2* | *490* | *60* |
| Mining | 10 | 14.4 | 26.5 | 4½ | 93.3 | 51 |
| Plantations | 17 | 9.6 | 7.9 | ½ | 24.6 | 108 |
| Total | 15 | 8.7 | 12.1 | 2 | 704.8 | 63 |

[a] Derived from figures relating to all oversea countries.

[b] This column is given as a guide to the relative importance of investment in the different industries.

[c] These figures are on a basis of replacement cost, and after deducting stock appreciation.

*General Note*: This table gives essentially the same information as Table XIV.1 (reproduced in Appendix H, p. 374) except that effects are here related to an increase of £100 of U.K. stake: this is assumed to be used to finance net operating assets, and to be supplemented by additional finance on the same scale as applied for the industry in question, on average, in 1955/64.

For other notes, see Table XIV.1, page 374.

becoming greater than they otherwise would have been.[1]

It is perfectly possible to do a similar 'over-simplified calculation' for the effects of the bigger expansion in the size of the overseas subsidiaries which would be associated with an increase of £100 in U.K. stake. This operation is, however, postponed to Chapter XXI, section F, so that it can incorporate certain changes in the method of making the original calculation, which are discussed in that chapter.

Meanwhile, three points of a general character seem to be worth making on the original analysis:–

Firstly, for this purpose the external financial obligations mentioned above include any financing done by the company in question, e.g. by selling abroad debentures or minority shares in its subsidiary. The fact that part of the obligations would take this form has some impact on the notional external financing charge which we brought into the 'over-simplified calculation' (see Interim Report, page 127), and it also affects the *liquidity* problem discussed in the next section of this chapter.

Secondly, in saying that the external financial obligations would be higher than they otherwise would have been we were certainly not implying that they would rise by £89 compared with their position at the beginning of the period. As a general proposition, it is entirely possible that a country which is doing direct investment overseas would otherwise be tending to have a surplus in its balance of payments, as a result of the general factors operating in the economy, so that this operation might therefore result in the external financial obligations remaining stationary, where they would otherwise have fallen – or indeed falling, but by less than they would have done otherwise.

In spite of the above, however, it still remains correct to make an allowance for an external financing charge, for the same sort of reason that a company which is not short of finance will nevertheless assess the results of a new department after making an allowance for the 'cost' of the capital put into it. If nothing better could have been done with the funds put into the overseas subsidiary, they could have been used to buy income-earning assets on some overseas money market, or to repay long-term debt.

Thirdly, if one allows for a financing charge on the whole of the external funds used in the overseas subsidiary, then any net surplus of post-tax profits which remains over that financing charge should – if such a calculation is thought useful – be related solely to the £11 of capital supplied from the U.K., and not – as some commentators seemed to imagine – treated as a return on £100. The matter is effectively taken to the limit on page 127, where the Interim Report was building up the consequences for the balance of payments from three items. The first of these showed a net return of rather under £2 as the profit earned by using the £89 borrowed abroad, after subtracting the corresponding external financing charge. This did not, of course, imply that the £2 was the return on £89; in effect the £2 was a return 'on nothing', being simply the profit margin obtained by borrowing abroad and earning a higher return than one had to pay as financing charge.

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[1] Throughout this discussion we are using the revised figures for subsidiaries of manufacturing companies.

I do not myself regard it as particularly fruitful to express the profits net of financing charges as a percentage of the net capital effectively supplied from the U.K. in this sort of way, but it is clear that the Interim Report would have benefited from a longer discussion of the subject. An alternative way of expressing part of the calculations on page 127 would have been to say that the profits on £100 of net operating assets, less the financing charge on £89 obtained overseas, gave a net gain of about £2½ per year on the £11 effectively supplied from the U.K.: this effect of 'gearing' in producing a high rate of return needs to be carefully related to the context, but at least it does reflect a certain reality, *so long as* it is possible to obtain the external finance without running into impossible liquidity difficulties.

The more serious misunderstanding which followed from a rather abbreviated treatment came in relation to page 130. Here item (ii) was taken by several commentators as implying no more than the fact that if one regularly invests abroad there will be some income from each quota of capital, which will eventually – if the process goes on long enough – mean that the income in a year will pay for the current year's new investment: whereas in fact the statement was emphasising that the income on each year's investment exceeds the notional financing charge, and that this *surplus* will eventually cover the new investment – a much stronger argument in favour of overseas investment.

### Rates of Return

Finally, it may be useful to see the rates of return earned on the two main types of 'outside' funds employed in British overseas subsidiaries, with the corresponding figure for U.K. stake for comparison. These are given in Table XVIII.2.

Owing to the nature of our basic information, the returns on U.K. stake and minority interests represent income accruing (including undistributed profits attributable to each source) and they are both given after deduction of all forms of overseas tax: the rate of deduction is often higher when a dividend is being paid to an overseas proprietor, and this raises the return to the minority relative to that on the U.K. stake. It is also, of course, quite possible for an industry to show a higher return to the minority than to the U.K. stake because it is the prosperous companies within it which have minority shareholders. Even so, it is perhaps a little surprising to find the sample as a whole showing a higher post-tax return to the minority shareholders, at 9.0 per cent, than that on the U.K. stake, 8.7 per cent.

On the other hand the interest payable on non-current liabilities (from which no tax has been deducted) averaged only 4 per cent. This is in part a reflection of the inclusion under that heading of some non-interest bearing items (e.g. provisions for future tax), but it also reflects some very cheap borrowing, notably in the U.S.A. (though not always for use there).

Table XVIII.2. Rates of return[a] on minority interests and non-current liabilities (Annual averages)

| Industry | Amount outstanding: U.K. stake £ million | Minority interests £ million | Non-current liabilities[b] £ million | Rate of return to: U.K. stake (post-tax) | Minority interests (post-tax) | Non-current liabilities[b] |
|---|---|---|---|---|---|---|
| | | | | % | % | % |
| Building Materials, etc. | 57.2 | 7.5 | 3.3 | 13.7 | 17.9 | 2.6 |
| Food, Drink, Tobacco, etc. | 447.2 | 36.8 | 33.6 | 8.7 | 10.2 | 2.7 |
| Chemicals | 128.2 | 28.6 | 30.1 | 8.4 | 9.0 | 5.3 |
| Textiles | 77.6 | 6.3 | 3.7 | 7.6 | 15.5 | 4.5 |
| Paper | 69.2 | 16.7 | 55.0 | 7.4 | 5.6 | 4.5 |
| Metals & Metal Products | 96.5 | 50.0 | 33.2 | 7.3 | 7.7 | 3.2 |
| Vehicles & Components | 90.1 | 14.4 | 11.4 | 4.9 | 7.4 | 5.0 |
| Non-electrical Engineering | 18.0 | 2.6 | 0.7 | 4.8 | 9.9 | 6.4 |
| Electrical Engineering | 48.7 | 6.9 | 5.7 | 4.8 | 7.2 | 5.8 |
| Total Manufacturing | 1,032.8 | 169.8 | 176.9 | 8.1 | 9.0 | 4.1 |
| Mining | 89.3 | 26.0 | 25.4 | 14.5 | 8.9 | 2.8 |
| Plantations | 92.7 | – | 3.8 | 9.6 | – | 1.5 |
| Whole sample | 1,214.8 | 195.7 | 206.1 | 8.7 | 9.0 | 3.9 |

[a] The average income accruing in the nine years 1956–64 has been related to the average size of the stake at the ends of 1955–63. No allowance has been made for changes in the value of money.

[b] In some industries non-current liabilities include a significant amount for items which do not bear interest – e.g. provisions for future taxation.

## B. Considerations of Timing

The three pages at the end of the Interim Report which dealt with this topic (pages 128–31) attracted an amount of comment which was in a sense quite disproportionate to their role as a gloss on a report dealing essentially with long-term analysis. Nevertheless the matter is obviously one of great topical interest, and it would have been better if the treatment could have been fuller.

The basic objective of the section was to put some rough numbers on to an essentially simple proposition, so as to get an idea of the relevant orders of magnitude of points which were clear enough in principle in themselves. In the Interim Report we took the topical case of the country being in balance of payments difficulties, and imposing restrictions on the amount of overseas investment which would be permitted. To emphasise the generality of the analysis, however – and in order to make the consequences of overseas investment appear on the 'positive' side, rather than to show the effects of restricting it – the basic proposition may be put in terms of imagining a sudden increase in the pace at which the country expands its overseas subsidiaries – say by £100 million a year. Unless the finance for this expansion is almost wholly obtained on long-term from overseas, the initial effect is an 'adverse' movement in the balance of payments on capital account, which exceeds the favourable effect on the current balance: if the country's balance of payments is strong and it has large exchange reserves, this so-called 'adverse' movement on capital account will be positively welcome, if only as a contribution to international harmony, but if the country has a deficit and poor reserves it will create difficulties. Furthermore, in the second year there will again be an adverse movement on capital account, if the growth of the overseas subsidiaries' assets is again rapid; admittedly there will be some gain on current account from the additional assets installed in the first year, but the net outcome will again be a tendency for exchange reserves to fall relatively to what would otherwise have happened.

The objective of the Interim Report was not to calculate how many years of restriction would have to pass before the thing 'balanced out': the calculations did not even try to bring compound interest into the picture,[1] but to give the essential orders of magnitude relevant to a short-period policy.

What then, should one add to the brief story given in the Interim Report? The most important thing seems to be to set out the whole story in a more tabular or 'accounting' form; apart from that, I can only add one or two comments on particular aspects which seem to have caused difficulties.

## The Story in More Detail

Let me start with one simple point. In this section of the Interim Report the analysis was concerned with the problem of overseas direct investment in the sense used throughout the book, as the process of expanding the assets of the overseas subsidiaries – without reference in the first instance to the form of the finance used for the purpose. The figures given in the section were all explicitly (and repeatedly) stated to relate to what would happen if all these funds were provided by the parent company, without any being raised overseas, but the reason for doing so was purely expository – this is the easiest case to describe: it certainly did not imply that this is the only case which is relevant, or of interest, or deserving of calculation. Indeed, not only was attention drawn to the importance of this assumption several times in the course of three pages, but the final paragraph starts with the statement '...the conclusions of this report which stand out are the possibility of reconciling objectives at least partially by resort to outside financing overseas...'

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[1] These were explicitly recognised (twice) on page 126, but explicitly ignored for the purpose of what followed: misunderstandings by commentators show that it would have been wiser to repeat the point explicitly on page 129, instead of relying on a general reference back in the paragraph (b). As we shall see below, however, compound interest does not become important for several years.

Nevertheless, it is clear that if one gives a set of figures for one possibility and not for any other, those figures are the ones which will be used: this is especially true if there is no precise indication of the method by which alternative figures can be produced for other assumptions, even though this is very simple. The account which follows shows how the restriction of overseas investment (i.e. additions to net operating assets overseas) by £100 million a year would operate on two alternative hypotheses:–

(a) If the finance for them would all have come from the U.K. parent (as in the Interim Report).

(b) If 40 per cent of it would have been raised overseas by the subsidiaries on long-term loans or by issues of shares.

In the first year of this policy then we have the following consequences (all figures being in comparison with the alternative position):–

| | (a) 100% U.K. finance | (b) 40% overseas finance |
|---|---|---|
| | (all figures in £ million) | |
| Loss of U.K. exports | 11 | 11 |
| Reduced long-term borrowing etc. by subsidiaries | 0 | 40 |
| Reduced borrowing from I.M.F. etc. | 89 | 49 |
| Reduced acquisition of net operating assets overseas | 100 | 100 |

Internally, if the operation is not to have a net effect on the level of employment (i.e. if the amount of deflation of total demand is taken to be the same in the alternative position) the level of home investment will be £11 million higher than it otherwise would have been.

In subsequent years the effects of not having done this investment in the first year will be a worsening of the current account of the balance of payments. This reflects the difference between the profits (after tax) which would have been earned on the £100 million of operating assets and the interest payable on the £89 million which would have been raised overseas in one form or another,[1] together with the 'continuing' effects on exports etc.: the figure starts at £4 million a year (see page 127), and then – if we are to include compound interest effects – rises by 5 per cent each year[1] (i.e. the figures, in £ million, are 4, 4.20, 4.41, etc.).

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[1] Strictly speaking, of course, this is not identical for the two assumptions, because the rate of interest on the subsidiary's debt would not be identical with that on the other borrowings; but to simplify the exposition we do not make any distinction.

In year 2 then, we get this loss of £4 million, and in addition the restriction of £100 million of net investment[2] produces the initial effects indicated above. The combined result for that year is as follows:

| | (a) 100% U.K. finance | (b) 40% overseas finance |
|---|---|---|
| Loss to current account | 11 + 4 = 15 | 11 + 4 = 15 |
| Reduced long-term borrowing by subsidiaries | 0 | 40 |
| Reduced borrowing from I.M.F. etc. | 85 | 45 |
| Reduced acquisition of net operating assets overseas | 100 | 100 |

In this year the level of home investment would be £15 million higher than in the alternative position, if one makes the simplifying assumption that the profits which are not received from overseas (as part of the £4 million) would have been spent on consumption (personal or government), and that the government's management of the economy works through influencing internal investment.

In year 3 the loss to the current account (in £ million) goes up to £11 + £4 + £4.2, or £19.2; and in year 4 it rises to 11 + 4 + 4.20 + 4.41, or 23.61. The borrowing from the I.M.F. etc. would, even on the second assumption, still be reduced through the restriction policy by £36½ million in year 4; nevertheless the difference between this figure and the £76½ million which the first assumption implies shows the importance of the companies raising finance overseas.

For a limited period, British companies might be able to raise 80 per cent of the money needed for their expansion schemes, if necessary by selling part of their existing equity in established subsidiaries to finance others; this would eliminate the effect of their expansion on the nation's financing problem altogether in year 4.

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[1] The rate of interest has been revised; see Chapter XXI, section E.

[2] The reader should remember that 'investment' was defined on page 240 as the addition to *net* operating assets overseas. The restrictions on investment in year 1 means that there will be less depreciation allowances in year 2, so that *gross* investment (or 'new purchases') will have to be reduced by more than £100 million below what it would otherwise have been. This implies that the restrictions in year 2 will have a bigger impact on the growth of productive capacity in U.K. subsidiaries overseas than those in year 1.

See also the discussion in Chapter XXI, section B.

## C. Selectivity

Apart from our emphasis on the importance of using overseas finance, the analysis in the Interim Report also led, on page 131, to stress being put on the need for selectivity in applying a restriction policy, if (after a review of all other alternatives) such a policy were considered necessary.

The analysis of how a policy of selectivity should be applied was not, however, developed beyond giving such obvious examples as the need to release foreign exchange to develop export marketing subsidiaries, and in cases where a relatively small *additional* amount of expenditure on an uncompleted scheme would make a big difference to the effectiveness of an existing investment (if this finance really could not be raised overseas).

To avoid misunderstanding, the Interim Report should have made clear that the principle of selectivity is not an easy one to follow. Past experience about the results obtained from investments done in a certain industry or in a particular country is not necessarily much of a guide to the likely results from some particular scheme which has been put forward by a specific company which falls in that industry-country category: our analysis showed that, even within an industry the variations between the results of one company and another were substantial, and the same applied to different investments in a particular overseas country. Obviously, one cannot justify an attempt at selectivity merely by showing that results are very diverse: with the aid of hindsight, it is easy to make brilliant decisions, but this does not mean that they could have been made *ex ante*. Certainly it was no part of the Interim Report's intention to imply that a government committee will be much better than the company itself at deciding which schemes will be profitable.

Nevertheless, one must beware of throwing the baby out with the bath water: the national interests are not identical with those of the company in this matter, and there is scope for some deliberate application of the principles of selectivity based on the criterion of national interest rather than profit prospects (important though those are). There is also scope for fixing the regulations in such a way as to encourage companies to follow practices which they might not otherwise adopt – e.g. by encouraging them to raise finance overseas (whether by compulsion, or by making them pay an investment premium on some or all of the funds supplied from the U.K.). This is not the place to discuss administrative procedures, which are right outside our terms of reference. Nevertheless, one can name some obvious criteria, such as the following, all of which should prove fairly easy to work into an administrative system, even though its application would not be perfect:–

(a) The profits to be expected, and the speed with which they would arrive – in part at least to be judged by the record of the applicant in his past ventures.

(b) The extent to which the capital expenditure by the overseas subsidiary would lead to exports of British capital goods, which would not be likely to be achieved unless the overseas venture were undertaken by a British company: evidence on this is fairly straightforward.

(c) The extent to which capital expenditure in the country in question might be expected to bring a general addition to U.K. exports (including invisibles) – a matter which we discuss in the next chapter (page 258).

(d) The extent to which a large part of the funds needed by the overseas subsidiary could be raised overseas: conditions about this can be included in the licence.

(e) The likely effect of the overseas development in fostering British exports in future – whether because it is essentially a marketing scheme, or because it will create a market for components etc. which would then be assembled overseas or otherwise used in the business; in the latter case, the question whether this would displace exports of finished goods would have to be considered as a possible offset – the 'safe' case being one like a lead mine, which will produce things not exported from Britain. (This matter is the most difficult to judge, because other things do not remain equal.)

In all these cases, one must remember that a great deal of overseas investment consists in *expansion* schemes, rather than completely new ventures, and the effects have to be assessed (however roughly) both with and without the expansion to get a comparison. One has also, of course, to avoid making the whole affair quite absurdly cumbrous, so that desirable schemes are abandoned by the potential activators who cannot face the administrative complications, and the standards set have to be reasonable: here the fact that investment out of undistributed profits is not subject to detailed control (provided that reasonable remittances are made) provides a merciful degree of flexibility – as does the possibility of raising overseas finance. There is no simple route to an ideal solution, but something can be done.

## D. Effects of Disinvestment

In the Interim Report we were concerned essentially with the effects of positive acts of investment in new or expanding overseas subsidiaries. It is true that we assessed these largely by considering what would have happened if investment had been on a smaller scale than it was, rather than a larger one; but that was essentially because it is easier to discuss with company representatives what would have happened if something which was done had been left undone, than to embark on a totally hypothetical discussion of what might have happened if some venture had been undertaken. Essentially, the 'effects' which we were discussing were those of growth.

The net total of the country's investment overseas is, however, the combined result of substantial expansion and of much smaller amounts of contraction; usually the latter was performed through the sale of an overseas subsidiary – or of the controlling interest in it – to local interests, but sometimes through sale to other foreign investors. This aspect of the matter may obviously become more important if there is a national policy of reducing the net total, and we were asked to say something about it in the Final Report. Our information on the subject is rather exiguous, but we asked some special questions of the plantation companies, where it happens that the matter is particularly important.

## Some Basic Considerations

Even without a profound study, it is clear that the effects of disinvestment through sale are not just the mirror image of the effects of investment. Three simple points will illustrate this:–

(a) In judging the profitability of positive investment, one relates the profits over the period (preferably plus the capital appreciation) to the cost of the assets (preferably adjusted to a basis of replacement cost). If one is judging the effects of a sale, however, the *cost* of the assets is fundamentally irrelevant – one is concerned with the price to be obtained for them – and it is *subsequent* profits which have to be set against that price, not the average for the last ten years. Past profits may have to be pressed into service as a proxy for future profits through limitation of statistics, but the profits of ten years ago may reflect a golden past (or an initial struggle to get started) which is not really relevant.

(b) There is nothing in the case of a sale to correspond with the 'initial effect', which positive investment produces, to increase the demand for U.K. exports of machinery. We do not, as it were, have to re-import the old machinery with part of the proceeds from selling the business – though something vaguely analogous may arise where the oversea enterprise is simply closed down, and the machinery is transferred to another subsidiary or sold to some independent buyer who might otherwise have bought from the U.K.

(c) In assessing the 'continuing' effect on U.K. exports, it is the position *after* the moment of sale which has to be considered, in order to compare the outcome in alien hands with what it would have been in continued U.K. ownership. If, for example, a factory has been developed to the point where it can now make nearly all its components, instead of importing them from the U.K., its sale may have little effect on future U.K. exports of components, although during the previous years the fact that it was a U.K. subsidiary had been important.

## The Feasible Question

The upshot of these points seems to be that we must define rather carefully and specifically the question to which we can attempt any sort of general answer. And we must confess from the outset that the question which we can answer may not be the one in which people are most interested.

In brief, the general question which we can tackle is to assess the consequences which would have followed from an imaginary sale in 1955 of (say) one-tenth or one-twentieth of the overseas investments reported by our sample, at the estimated market valuation, as returned by the companies.

The reasons for this formulation are probably fairly clear, but it may be as well to stress the important ones:–

(a) The consequences must necessarily be assessed in relation to a sale at a particular date for which we have some approximation to a market value for the business. The Stock Exchange values (or estimated equivalent) which we collected for 1955 and 1964 are the best approximation which we can get, though many companies stressed their limitations.

(b) We must choose 1955, rather than 1964, because we then have some results for the period *after* the notional sale. These are contrasted with the results which might have emerged if the enterprise had been sold – which are essentially conceived as being in the 'financial' field.

(c) We are *not* judging the effects of disinvestment by reference to the sales which actually did take place – which were relatively few, and for which we know little or nothing about the subsequent history of the enterprise (which would in any case be a dubious guide, since we would need to know what the results would have been under continued British ownership). We are judging from a comparison between the results actually secured on enterprises which were retained, and the estimated position which would have emerged if they had been sold: and as it would obviously be improper to use hindsight in selecting the enterprises which should be the subject of this notional sale, we work with the average.

## The Statistical Picture

With the question posed in this way, the analysis and results do after all bear a strong family resemblance to the mirror image of those obtained in studying the effects of positive investment, but with two main differences. Firstly, there are no 'initial effects' on U.K. exports of machinery, for reasons explained above; and secondly, the 'continuing effects' have to be calculated with reference to the assumed selling price, and not with reference to book values (whether of the net operating assets or of the U.K. stake). If, for the sake of illustration, we say that £100 of U.K. stake (at book values) in subsidiaries of manufacturers gave, on average, 'continuing' results as indicated in section A above, and we know from Table V.2 that the market value of this was, on average, £113, then all the figures need to be divided by 1.13.

The results of this exercise are shown in Tables XVIII.3 and XVIII.4, for the sample as a whole. The first table deals with the effects of a notional sale of overseas subsidiaries which would, in 1955, have had a market value of £100 for the whole enterprise (or it may be easier to picture the thing by imagining that the figures are all in £ million); the second table considers the case where the notional sales would have yielded £100 for the *U.K. stake*, and thus reflects a rather bigger disposal.

In the main, these tables may be left to speak for themselves; the first section describes the particulars of the notional sale, the second shows the losses to the U.K. which would have resulted (which are based on what actually did happen), and the third section shows the continuing gains to the U.K. which would have come from a financial investment of the proceeds of sale.[1]

Table XVIII.3. Effects of Disinvestment: A

(Expressed per £100 of *net assets* at 1955 market values)

| | Item | Effects (£) |
|---|---|---|
| | (a) *Particulars of notional sale* | |
| 1. | Market value of net assets | 100 |
| 2. | Book value of net assets | 86 |
| 3. | Book value of U.K. stake | 70 |
| 4. | Market value of U.K. stake | 83½ |
| | (b) *Continuing losses to U.K.* | |
| 5. | Post-tax profits accruing to U.K. | 6 |
| 6. | Ditto, plus capital appreciation | 8½ |
| 7. | Exports of goods and services from U.K. | 1¼ |
| | (c) *Continuing gains to U.K.* | |
| 8. | Income on *4* | 4¼ |
| 9. | Capital appreciation on *4* | ? |

*Notes*: Figures relate to the whole sample (not including oil). Rates of return are on an accounting basis (i.e. not adjusted for replacement cost, etc.).

The calculation of the gain from investing the proceeds of sale raises similar problems to those which we encountered on page 127 of the Interim Report, when we needed an 'external financing charge' to set against the income from positive investments made overseas. Some scrappy material on this is included in Chapter XXI, but we are still not in a position to give any authoritative figure for this purpose, and doubt whether there is a logical basis for arriving at one. The upshot seems to be that for our present purposes the best rate of interest to use is 5 per cent, or possibly a little more: since the financial assets which might be acquired with the proceeds of the sale might well include equity shares, it seems right to envisage some capital appreciation as well, but we are unable to put a figure on this.

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[1] In particular cases, the parent group might have used the proceeds for some other overseas development, but this fact would only be relevant if that development would not otherwise have taken place. Under certain types of exchange control this point might well be relevant, but we have not attempted to explore those possibilities, and have treated the 'gain' from disinvestment as a purely financial affair.

On a broad view, however, it is fairly apparent that the income from the direct investment overseas in the form of profits was probably greater than even a generous estimate of the income from the alternative financial assets, and the inclusion of capital appreciation in the picture would enlarge the difference. Over and above that, disinvesting would have led to some loss to the U.K. balance of payments in the shape of a lower demand for exports of goods and services.

Table XVIII.4. Effects of disinvestment: B

(Expressed per £100 of *U.K. stake* at 1955 market values)

| | Item | Effects (£) |
|---|---|---|
| | (a) *Particulars of notional sale* | |
| 1. | Market value of U.K. stake | 100 |
| 2. | Book value of U.K. stake | 83½ |
| 3. | Book value of net assets | 103 |
| | (b) *Continuing losses to U.K.* | |
| 4. | Post-tax profits accruing to U.K. | 7 |
| 5. | Ditto, plus capital appreciation | 10 |
| 6. | Exports of goods and services from U.K. | 1½ |
| | (c) *Continuing gains to U.K.* | |
| 7. | Income on *1* | 5 |
| 8. | Capital appreciation on *1* | ? |

*Notes*: See previous table.

One final word of caution is, however, perhaps desirable. The comparison between the gains and losses from disinvesting depended directly on the level of market prices for U.K. subsidiaries overseas, and in 1955 the appreciation of market value over book value was relatively modest. In 1964, this appreciation had considerably increased, the percentage for the sample as a whole having risen from 19 per cent to 36 per cent (see Tables V.2 and V.3). A computation based on sales in 1964 or some other year might show less favourable results – but cannot of course be made at the moment.

## The Special Case of Plantations

Disinvestment has probably been more important in the case of plantations than in any other industry. Sometimes it has taken the form envisaged as typical above, through the sale of all the shares in a British subsidiary: more commonly, however, the method has been to sell one plantation out of several to local purchasers.

This raises rather different issues, particularly on the method of valuation which should be used when one envisages sales of this kind: stock exchange values apply to the company as a whole and are a bad guide to the figures for single plantations.

These matters are discussed at some length in Appendix I, which describes all the information which we obtained from the plantation companies, and puts the question of sales into proper perspective.

# XIX The Model Further Considered: 1. Repercussions through Effects on Overseas Demand

*This chapter and the next deal largely with technical points: readers who are not interested in such matters can omit them without losing the thread of the argument.*

Any discussion of such a problem as the effects of overseas investment has to be based on a number of assumptions, which economists conventionally classify under the title of 'a model'. For the Interim Report the details of the model which was used were fully set out in Appendix C.

These assumptions were needed primarily for two rather different purposes. The first was to show what we were assuming about the macro-economic policy followed by the U.K. Government, and I have to thank Professor John Dunning for pushing me into writing something explicit about this at the outset, as the basis for the analytical thought behind the enquiry. Secondly, we needed an assumption about what would have been done by rival producers (or potential rivals) if a British company had not set up a particular subsidiary : this was essentially needed for the work of the team in discussing with company representatives what the consequences would have been, and for this one needed to have an assumption which could be applied *in detail* to particular cases.

What the Interim Report failed to do was to discuss the macro-economic repercussions from British overseas investment on the economies of the overseas countries. Any analysis short of a comprehensive world-wide analysis of all aspects of the whole world must, of course, stop somewhere and regard further repercussions as too small to be brought into the picture; but it was not legitimate to omit any consideration of this matter at all, especially as the quantitative size of the effects might under certain circumstances be substantial. This chapter considers, therefore, what is sometimes called the 'general feed-back effect' from repercussions in the overseas countries, essentially in the year in which the investment is done (so that this would constitute additional 'initial effects'). The next chapter then considers points about the assumptions which were made in the Interim Report – and again is concerned mainly with those affecting the 'initial effects' rather than the continuing ones.

For an appreciation of all the points it is important to remember that the Report is analysing the effects of a moderate *change* in the rate of overseas investment, not its complete abolition. Arguments which might be valid for the case of abolition – e.g. of all U.K. investment in Australia – may be of no importance or even invalid for a moderate change, because there is some inherent flexibility in the system.

## A. The Problem Stated

A useful introduction to this set of problems may be obtained from the letter published in the *Economist* for 22 April 1967, from Professor E.A. Russell of Adelaide, which ran as follows :-

> 'Sir – One of the many virtues of Mr. Reddaway's report on the effects of United Kingdom investment overseas is the careful listing of the assumptions that lie behind the analysis and estimates. Those who were surprised by the small predicted effect on British trade are able to decide whether they were mistaken about matters of fact, or had a different view about which assumptions are relevant.
>
> In the report, the effects of overseas investment are limited, by assumption, to those that flow from ownership of overseas enterprises by British residents rather than by local or other foreign investors. Everything else in the system is assumed to be unchanged.
>
> It might be argued that we should take into account a further class of effects ; those which follow from changes in the balance of payments of the countries where the investments are made. If trade and employment policies in the receiving countries are subject to balance of payments constraints, their current account balances will adapt to the changed flow of investment funds. British trade will benefit not only from the fact that the enterprises are installed and operated by British residents but will also share in the general increase in imports as previous limits are eased.
>
> In the case of Australia at least, trade and employment policies have ensured that overseas borrowing has been effectively used to finance current account deficits. It has wanted to increase domestic expenditures and not to accumulate international reserves year by year.
>
> In short, to judge the total effect of overseas investment on British trade, the report would have to be supplemented by estimates of the balance of payments responses of the receiving countries and of the share of British exports in changes in the borrowing countries' imports.
>
> Yours faithfully,
>
> E.A. Russell'

Professor Russell also sent me at the same time a letter which went into the matter at somewhat greater length, and my reply to some extent reflected the points made in that letter. This reply appeared in the issue for 13 May (the delay reflecting the pressure on the correspondence columns of the *Economist*), and was as follows :-

> 'Sir – Mr. E.A. Russell (April 22nd) raises an extremely interesting point in relation to the assumptions and methodology of my book "The Effects of U.K. Direct Investment Overseas." He is perfectly correct in saying that, to judge the total effect of overseas investment on British trade, one should supplement the analysis which we made with estimates of the balance of payments responses of the receiving countries. I would not, however, accept the implication of his final words, which is that these responses would necessarily lead to changes in the borrowing countries' imports, even in the

case of Australia, where there has been a policy of using overseas borrowing to finance current account deficits. The matter is a good deal more complex than this apparently plausible statement implies.

Essentially, the complexity comes from the fact that the response to a reduction in one form of capital inflow may well be an increase in a different form of capital inflow, rather than any change in the trade statistics. Thus if a British chemical manufacturer had not expanded its Australian subsidiary, a similar expansion might have been done by an American company, which would see the opening for profitable investment: in order to assess the continuing effects on British exports, we made the convenient assumption that a broadly similar development would be undertaken, either by another foreign company, or by a local one. If the development were undertaken by an American company, the effect of the switch on the Australian balance of payments would be negligible, and Mr. Russell's point disappears. Even, however, if it had been done by an Australian company, the Australian reaction to the reduction in this form of capital inflow might well have been to improve the Australian capital account by (for example) arranging to convert one of its maturing obligations in London, instead of repaying it.

The complexity of the problem is, of course, no excuse for our not having discussed it, and we will certainly do so in the final report.

Yours faithfully,

W.B. Reddaway'

What, then, do we need to add to these brief statements? First, Professor Russell was making the point – which I entirely accept – that if there is a rise in the *total* inflow of capital, net of repayments, then the Australian authorities would be free to manage their economic policies – whether through fiscal and monetary action, or by relaxing on import controls, or both – in such a way as to raise the level of imports (or reduce exports). This is an element in the picture which ought to have been included in our picture, and it is useful to start with a rough analysis of the quantitative importance which it *may* attain – even though, as explained below, £100 of investment in Australia by a U.K. company by no means necessarily implies a net inflow of capital into Australia of £100.

To take the strongest case, then, let us imagine that we are comparing these two situations, looking at the matter essentially from the Australian end:-

(a) A British company does £100 of capital expenditure in its subsidiary, providing all the funds from outside Australia.

(b) There is no such expenditure, and this fact has no influence on capital expenditure by anyone else in Australia, as compared with alternative (a).

In the former case a substantial part of the £100 will be spent on buildings and other Australian made goods, some will be spent on imports from the U.K., and some on imports from elsewhere. We did not, unfortunately, ask about the division between purchases from Australia and purchases from countries other than U.K., but we can follow the argument by assuming that the broad position was typically something like this:-

| Country of origin | Amount (£) |
|---|---|
| Australia | 78 |
| U.K. | 12 |
| Other countries | 10 |
| | 100 |

The figure for Australia has to include all internal expenditures on erection, transport, etc.

Initially, Australia will add £78 to her exchange reserves – at least in comparison with the second case. Activity and/or import quotas will however then be greater than in the second case – whether through automatic multiplier effects, or through deliberate Australian policy, or through a bit of both; in the extreme case which we are considering, we assume that this leads to a further rise of £78 in Australia's imports (without affecting her exports). These imports will be of a general kind, not identifiable as due to any particular cause, and certainly not ascertainable by any questions to representatives of U.K. subsidiaries, or indeed to anybody. For want of any better information, we might assume that about one quarter of them (i.e. £20) would come from the U.K., in line with Britain's average share in Australia's imports; with £12 of imports bought by the subsidiary, this gives a total of £32 – which may be the sort of thing which Professor Russell was expecting.

Why, then, did the Interim Report come out with a figure which not only did not add on the £20 of 'indirect' imports, but reduced the £12 of direct imports to £8? The answer is of course that it was answering a different question, in which the alternative situation to the British investment of £100 was assumed to be a similar investment by somebody else: if that somebody else were (say) an American or German investor, then the Australian balance of payments would not be affected – the fact that an American investor has seized this particular investment opportunity has a negligible effect on other possible expenditures by Americans. All that is affected is the probable origin of the imports required for the investment itself, which is likely to be shifted in considerable measure to the investor's own country: we assessed that, on average, the direct imports from the U.K. would then be reduced from £12 to £4, so that the initial effect on British exports of the investment having been done by a U.K. subsidiary was £8 – with a *maximum* figure of £12.

How was it, then, that the Interim Report came to concentrate so exclusively on assumptions of the second type, and what should one say now that the position has been opened up? The answer to the first part of the question, as a matter of history, is at least simple, though not very flattering: in the interests of assessing the *continuing* effects, we made the basic assumption that investment opportunities not taken by U.K. companies would be taken by somebody else, and in writing the report I slipped into regarding that somebody else as another foreign investor. It was not legitimate to dismiss the matter in this way, but at least it provides the analysis for quite a common case, especially for *marginal* changes in U.K. direct investment: it should feature in the story, but its nature should have been stressed, and other alternatives examined.

## B. No Alternative Producer?

If one is to fill in more of the picture, there are two main alternatives to consider: *a local company* as alternative producer, and *no alternative producer* at all. A limited investigation of the second of these possibilities was in fact made in the Interim Report on pages 110–11, where the assumption was examined that in aggregate alternative producers might have made only 90 per cent of the British subsidiaries' output, instead of 100 per cent. The emphasis of that analysis was essentially on *continuing* exports, rather than initial effects, and it led rapidly to the conclusion that the adoption of such an assumption would make the continuing effects of overseas investment by British manufacturers[1] appear very much less favourable: the section did end with a note to the effect that the initial effects would come out slightly more favourably than was shown in the basic tables (effectively because one would be making no deduction for sales of machinery to the substitute producer, on one occasion out of ten), but the analysis was not extended – as it should have been – to include indirect effects of the type sketched above.

So far as this part of the analysis is concerned – i.e. the possible assumption of no alternative producer – I have no hesitation in saying that it is much better to stick to the assumption that there is an alternative producer as the standard case: it is a plausible assumption in a great majority of instances, as our discussions with company representatives bore out, as well as being analytically simple. It is then open to those who wish to study particular cases to do so, in the light of their very varying circumstances. Such an analysis would have to consider a number of points, notably the following:-

(a) The 'balance of payments response' which the receiving country would have made in the initial year if it had not received an inflow of capital from the British company (discussed below, page 256).

(b) The direct continuing effects on exports from the U.K. caused by the existence of the subsidiary, which depend on the nature of its activity: these would usually be unfavourable if it is to make goods overseas of a kind exported from the U.K. (assuming that no alternative producer would otherwise be established), but neutral or favourable if it is (e.g.) a copper mine.

(c) The indirect continuing effects arising through the development of the host country which the subsidiary makes possible, including those caused through the effect of the subsidiary's operations on its balance of payments where that is an important constraint.

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[1] The analysis was stated in general terms, without reference to the nature of the investor; the argument was however developed on page 111 as if one were discussing investment by manufacturers, and it does not apply in the case of mines and other enterprises making goods not produced in the U.K. I must apologise for not having allowed for this point, but the orders of magnitude were not seriously affected for the general aggregate.

The only generalisation which seems to be called for is really a warning: if one is to embark on this more complex exercise (as contrasted with our 'standard case', which assumes an alternative producer), one must consider *all* the important effects. It is not legitimate to say that the initial effect will be more favourable (as it nearly always will, though the difference may be very small) and ignore the continuing effects – which are likely to be more important, because they continue, and which are usually unfavourable.[1]

## C. A Local Producer as the Alternative

The more interesting case – especially for such countries as Australia – is the one in which there would be an alternative producer, but he would be locally financed. On such an assumption the direct continuing effects on British exports may, in a broad way, be regarded as similar to our standard case: if the efficiency of the local producer is not the same as that of a potential investor from abroad, the tariff mechanism is liable to lead to much the same results for British exporters, though not perhaps for Australian consumers. The *indirect* continuing effects on British exports will not be identical – Australia will not develop in just the same way, and her balance of payments will be affected by the question whether the enterprise is owned by Australians or Englishmen: but such differences may well be regarded as too small to justify consideration in a general analysis, and they will be much influenced by the Australian Government's choice of policy.

The really interesting comparison is in the initial effects. It is tempting to say simply that the capital expenditure will be the same, whether the enterprise is financed in Australia or by a U.K. company, and so will the amount of machinery imported into Australia: consequently for every £100 spent on the enterprise, the Australian exchange reserves would 'initially' be £100 greater if it is owned by the U.K. company than if it is owned by Australians, and this £100 would then be diverted to a 'general' increase of imports because it was the Australian Government's policy to respond in that way to a gain in reserves (whether through relaxing import controls or through a general policy of fiscal and/or monetary expansion).

On this superficially attractive argument the initial effects on U.K. exports of the overseas investment by the British company would then be:-

(a) The U.K. share of the £100 of Australia's additional 'general' imports – perhaps £25.

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[1] See the discussion in the final section of Chapter XXII (page 298), inspired by the receipt of the Hufbauer–Adler Report, which arrived too late to be considered in this chapter.

(b) Any increase in the U.K. share of the machinery imported for the enterprise, which might come from its being owned by a U.K. company, rather than an Australian one: conceivably this might amount to £3 (i.e. the Australian company would have bought £9 worth from the U.K., as against the £12 which was actually bought from the U.K. by the British subsidiary).

On this approach, the total is thus £28, as against the £8 shown as initial effect in the Interim Report.

## D. More General Considerations

The above approach is useful as a means of deriving a sort of *upper limit* (which would of course have to be calculated separately for each country). It is not, however, in any sense suitable for giving a *general answer*, for which the following points must all be very firmly brought into the calculation :-

(a) 'Outside Finance'. The calculation has assumed that all the finance for the expansion of the British subsidiary would come from the U.K., and this is why £100 of additional 'general' imports were assumed to be possible as compared with the locally financed case. On the average of our sample, however, some 40 per cent of the finance was raised from outside sources, and the great bulk of this would probably come from investors in the host country (if we are considering one of a type which might otherwise run the enterprise itself). Consequently the 'initial gain' of exchange reserves would, on average, be only £60, not £100: the additional general imports would also be reduced to £60, with the U.K. share of these at £15; and the total initial effect would be £18, not £28.

Alternatively, the Interim Report's figure of £8, which is measuring the initial effect of an expansion of £100 in *net operating assets*, must be increased to reflect £100 increase in U.K. stake; we have explained in the preceding chapter why we think that comparisons are best related to increases in operating assets.

(b) What Type of Alternative Producer? It was a mistake for the Interim Report to ignore the possibility of a local producer as the alternative when assessing the initial effects, rather than one financed from another country; but obviously we must not fly to the other extreme and assume nothing else. For a general picture of any particular country, one would need to combine the two assumptions in suitable proportions. (This is what we tried to do for assessing the continuing effects on U.K. exports.)

(c) The Balance of Payments Response. Our final – and most difficult – task is to consider what one really should assume about the balance of payments response of the host country to an inflow of capital to U.K. subsidiaries. So far we have been assuming – in order to see the *maximum* result – that the host country reacted by a policy which caused (or permitted) the level of imports of goods and services to rise in such a way as to keep the movement of exchange reserves the same as in the alternative position. But even if

> that result is to be produced – and we can well imagine a country with strong reserves, e.g. Germany, ignoring such a factor, or a country with weak reserves thankfully raising them, though unwilling to take unpleasant action to make them rise – there is nothing sacrosanct about producing this result through a movement *in imports of goods and services*. We must consider in each case how the thing might work out : perhaps we may continue to focus our ideas by using Australia as an example, whilst recognising that it is a 'strong case', because British direct investment was very important there (see Table IV.6).

First, we need to picture the thing happening. If the flow of direct investment from the U.K. is fairly active (in place of possible ventures by Australians) there will tend to be an accumulation of reserves. This is not a planned operation, so that some accumulation may well actually take place – at least by comparison with the alternative position. During that period – before any positive policy affecting imports has been adopted – the course of events will normally lead to other decisions having to be taken. Maybe one of Australia's pre-war loans reaches maturity in London, and the question is whether it should be repaid or converted : with the strong state of Australia's reserves, she would find it hard to resist suggestions from London that repayment would facilitate the working of the Sterling Area – especially as the Australian Government can more easily raise funds locally when the banking position is easy.[1] Or there may be pressures for greater freedom for Australians to buy oversea securities, which are harder to resist when the reserves are good. There will be little chance of obtaining development loans from the World Bank or any other international body, when these are so largely reserved for countries with balance of payments problems.

In brief, a rise in one form of capital inflow – direct investment from Britain – may well lead to some diminution of other types of (net) capital inflow, without there being any policy directly connecting the two : the direct investment simply means that the circumstances in which various essentially financial decisions are taken tell that way. The World Bank did not stop granting loans to Australia because it was uninterested in the completion of the Snowy River scheme or other developments ; the Australian loans in London were not repaid because U.K. investors dislike holding them – nor yet because Australia was anxious to get clear of such debt ; the greater liberalisation of Australia's outward capital movements did not simply reflect a change in her priorities. All these – and other – financial decisions reflected the fact that Australia's over-all balance of payments had been greatly strengthened by a vast inflow of private capital.

This is not to deny, of course, that the volume of general imports into Australia has been higher than it would have been in the absence of the inflow of private capital. If the entire flow of British capital had been eliminated – including the use of undistributed profits, all of which would then have been repatriated – it is clear in the Australian case that the position would have been altered so radically that a full-blown analysis of all the possible alternatives would have been needed: there would doubtless have been changes in both physical and financial flows. For the sort of marginal change which we are considering, however, less offsetting financial movement *could* have done the trick, and there is some reason for regarding them as first in the firing line. What is certainly clear is that it would need far more resources than we possess to assess how far the changes would have been of one type rather than another for each of our fifteen countries.

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[1] A comparison between the proportion of Australia's maturing loans which has been repaid since the war and the position for New Zealand is revealing. So is a comparison between the high level of Australia's governmental borrowing abroad in the 1920s and the position in the post-war period.

I see no feasible alternative, therefore, to saying that our basic assumption about an alternative foreign investor should remain as the standard case. It automatically removed the problem of 'balance of payments response', because it implied that the investment by the British company automatically led to the corresponding absence of a potential inflow from elsewhere; this made the analysis simple, but its justification must lie mainly in the fact that it is also a plausible case, which should feature largely in any average which one might try to produce. I can only leave those concerned with particular problems to allow for the particular features of these in the light of this general discussion.

At the same time I must express my gratitude to Professor Russell and others who revealed the need to discuss alternative possibilities, and I apologise for not having done so before. It is rather a relief to have worked roughly through one 'strong' case by way of illustration, and come to the figure for initial effects of only £18 per £100 addition to net operating assets even *before* any deduction for the 'response' being partly in the financial field, and assuming that *all* alternative producers would be Australian companies. This is of course more than double the figure of £8 given in the Interim Report, for the 'foreign company' case, and the figure would doubtless remain higher if one allowed for the 'financial' response: but even taking it as it stands – rather than first reducing it and then averaging it with the £8 to get a generalised figure – its use in place of £8 might not make much difference to the answer to a practical problem, for which the important point is often whether the figure is 'about £50' or 'about £10'.

## E. Policy Matters

At two points in the above discussion I have taken the traditional 'easy way out' of looking at difficulties and then passing by on the other side with remarks about practitioners allowing for special circumstances. Let me hasten to show that this is not meant to be a mere dodging of awkward issues, by showing its relevance to the question raised in the last chapter about 'discrimination between countries' in allowing overseas investment when faced with balance of payments difficulties.

In that chapter I said in point (b) on page 243 that the selectivity principle should call on the applicant to show how much of the capital expenditure by the overseas subsidiary would be devoted to British machinery, etc., and added in point (c) that the authorities would consider how much of the 'local' expenditure would be reflected in a general addition to U.K. exports. This calls for consideration of one question which is specific to the individual case: if the expenditure is not done by the British subsidiary, will it – or something broadly equivalent – be done by a local investor, or by a subsidiary from another country, or not at all? On this matter evidence from the applicant is clearly useful: if he says 'a subsidiary from another country', the general balance of payments response will be much the same as with British investment, and the issue can be ignored. If he says either of the others, then the British investment may lead to additional U.K. exports through 'balance of payments response,'[1] and this should be assessed by the authorities on the basis of a broad general analysis in respect of each country, which would be applied to all cases. It would consider two main questions:-

(a) *What sort of 'balance of payments response' do we expect* to a gain of foreign exchange? – The answers might range from 'The country has abundant reserves, and will try to neutralise the effect of the inflow on internal monetary conditions and so avoid any impact on its imports' to 'The country has been regarding the level of its reserves as compelling it to impose import restrictions (or pursue a restrictive monetary and fiscal policy, with considerable unemployment) and it can be relied on to relax its policies sufficiently to spend on imports all the foreign exchange which it may gain'.

These assessments would of course have to take account of the possibility that the country was desperately anxious to raise its exchange reserves, rather than increase imports, or would respond partly in the financial field. Such reactions might of course benefit the British reserves – e.g. if the recipient country kept its reserves in sterling, or would repay sterling loans on maturity.

(b) *What proportion of its imports does the country get from the United Kingdom?* Ideally of course this question should be related to the proportion of its *marginal* imports, but the average will usually be much better than nothing. One needs to consider services as well as goods.

The combination of the answers to these two questions gives a quantitative measure of this particular factor. In general it cannot be treated as a very important one, because it only applies to the subsidiary's expenditure which is not used for imports, and it does not apply at all if the alternative is investment by a foreign company. But one could imagine it as having an important influence in particular cases. There might, for example, be a proposed investment in New Zealand, for which the plausible alternative might be the expansion of a New Zealand company; New Zealand's exchange position is such that the inflow of foreign exchange would be reflected in imports; and Britain is the major supplier of New Zealand's imports.

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[1] The assessment of the *continuing* effect on the parent company's exports must of course be examined on the same assumption about these matters as these initial effects.

# XX The Model Further Considered: 2. Various Alternatives

*This chapter deals with technical points, and readers who are not interested in such matters can omit it without losing the thread of the argument.*

So far we have been discussing the absence from the model of any allowance for repercussions on the U.K. of effects produced externally: we turn now to discuss the assumptions which were made about internal repercussions, and possible alternatives. It is not of course my intention to comment on all the comments which were made on the treatment given in the Interim Report, but only to deal briefly with points where discussion seems likely to be of general interest.

## A. No Need for an Alternative Position?

I start first with a variety of comments to the effect that somehow the effects should be deduced directly from the accounting records of the companies, without any comparison with an alternative position. An example of the failure to appreciate the very simple arguments of the Interim Report, which has been widely quoted, appears in the article by W.A.P. Manser in the *Westminster Bank Review* for August 1967. A reply was written by my colleagues, S.J. Potter and C.T. Taylor, in the November 1967 issue of the same review, and I would not mention it – since I can do no more than repeat arguments which seem to me crystal-clear – if it were not that wider currency has been given to the idea that the Interim Report applies over-rigorous standards, by which recorded exports are in some mysterious way 'reduced by seven-eighths'.

Briefly, then, let me repeat[1] that the object is to establish the effects of having overseas subsidiaries, not just the amount of business which they handle, or the contribution made by the parent companies to the export drive. In a number of cases companies route all their exports to a particular country through their local subsidiary: can one seriously suggest that these eminent companies would have sold *nothing* in that country if they had had no subsidiary there, in defiance of the fact that they had exports to other countries where they had no subsidiary, but sold through agents? If not, it is meaningless to say that the whole of their sales to their subsidiaries represents the 'effects' of having the subsidiary. And if a company's representative tells you that the company would have exported more from the U.K. if it had not had a subsidiary producing its main brands in a certain country, must not one enter a *negative* sum to represent the effects on U.K. exports of that subsidiary, even though it bought some goods from the parent?[1]

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[1] The full argument is on pages 21 – 3 of the Interim Report.

Perhaps I may supplement this point by directing the attention of enthusiasts for the use of actual transactions, with no 'intricate recalculations', to this quotation from the Interim Report, page 21 which sets out our views about the treatment of imports from the subsidiaries into the U.K.:-

> 'Conversely, if a British manufacturer establishes an overseas subsidiary to produce bauxite for use in the production of aluminium in the U.K. it would be totally unreasonable to regard the overseas subsidiary as imposing a great "burden" on the British balance of payments, because it was continually insisting on payments from Britain in foreign currency for the bauxite which it delivered.'

It is perhaps noteworthy that Mr. Manser's enthusiasm for using actual transactions did not extend to suggesting that we should nevertheless subtract the subsidiaries' (actual) sales to the U.K. group in arriving at the balance of payments effect. When the illogicality of his position in this respect was mentioned in my colleagues' reply, he remained conveniently silent on the matter in his rejoinder: on his approach, the logical thing would have been to say that *all* sales to the U.K. should be subtracted, not just those to the parent.

## B. Widespread Reform?

Another category of suggestions lay at the other extreme, in suggesting that comparison should be made with a situation in which all sorts of desirable changes had been made, such as a big increase in science-based investment of a cost-cutting type, or the adoption of measures to ensure that there was no balance of payments problem, or even the ending of restrictive practices.

On all this I can only reply that if one is to study the effects of direct investment overseas, one must construct an alternative position in which those changes take place which follow more or less automatically from doing rather more (or less) of such investment, and – if this leaves a gap in the model – 'fill up' with such other assumptions as are of the most neutral kind. It seems clearly wrong to estimate the effects of overseas investment by envisaging that a reduction in it would enable us to introduce such unrelated changes as an increase in science-based internal investment: the cut in overseas investment might facilitate a *general* increase in investment, but the main attractions of this kind of proposal lie in the words 'science-based' (or 'cost-cutting'), and the problem is to find how in practice to induce such enterprise. If one can solve that, then many devices are possible to ‘make room’ for the extra expenditure, which have nothing to do with overseas investment.

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[1] This simple point is the one which some commentators seem unable to appreciate – see, for example, Mr. Manser's rejoinder in the *Westminster Bank Review* (February 1968). In many cases it is not just a matter of eliminating some fraction of the goods bought by the subsidiary for re-sale, but of replacing that positive figure by a negative one.

In brief, I have every sympathy with those who want to make the kind of analyses which examine a whole package deal of changes, designed to improve a country’s economic position. Such analyses are in many ways more useful than a study of the effects of changing one factor in isolation – or rather, in combination with ‘neutral’ changes designed to preserve some over-all macro-economic assumption. Certainly if it comes to policy prescriptions, one must not be content with showing that a problem can be solved (or alleviated) by operating on the particular factor which one happens to have been examining: that is why, on page 131, I went outside my terms of reference to emphasise that, in a balance of payments crisis, one should not necessarily adopt a policy of curtailing direct investment overseas because it would bring some relief, but should first make a full review of alternatives to see what combination of possible measures would yield the most desirable outcome. Nevertheless, if one’s job is to assess the effects of a change in the scale of direct investment overseas, then one must restrict one’s desire to include as ‘counterparts’ one’s own pet remedies for the economic shortcomings of the nation.

## C. Consumption or Investment as Alternative?

A special case of the above arose in connection with the problem of ‘offsetting’ an increase in exports, by some reduction in internal demand. Our research showed that an increase (or curtailment) of direct investment overseas had remarkably little automatic effect on the amount of investment done in the U.K. by the companies concerned (see the Interim Report, pages 93–5). Consequently any adjustments in internal investment or consumption which are to be assumed to go with the change in overseas investment have to be brought about as part of the general process of macro-economic management – usually achieved through fiscal and/or monetary policy – in which a modern U.K. Government is inevitably involved. We can say nothing about what this implies without attributing to the government some objectives which it can plausibly be thought to have been pursuing.

In the Interim Report our basic assumption was that the counterpart would be an adjustment of internal *investment*, and the question has been raised more than once whether we should not have chosen an adjustment of consumption, ‘because then an increase in overseas investment would not entail losing the benefit of any internal investment’. It is of course perfectly sensible to analyse a question of this kind, but one must then recognise that one is not assessing the effects of increased overseas investment as such, but rather of that increase *coupled with increased national thrift* – produced (for example) by more government saving. Part of the future gain in income is then due to the increased accumulation of capital through increased thrift, which could equally well have been induced independently of any change in overseas investment.

## D. Different Basic Assumptions

The last sub-section is in a sense a special instance of the wider problem of the choice of basic assumptions, including one's assumption about the main controlling forces in the economy. This matter was, in particular, discussed by Professor Morgan in the *Banker* for May 1967, and is clearly one of great intellectual interest – though it is perhaps as well to remember that, in comparison with other macro-economic items and their possible changes, a change in the rate of direct investment overseas is a very modest affair.[1]

The analysis of this problem in Appendix C of the Interim Report recognised, in its very first paragraph, that 'there are as many answers as there are varieties of assumptions which one thinks it useful to make', and in its second paragraph that in principle one might analyse the effects of the initial act of making the investment 'on assumptions which clearly precluded it from having any effect on the actual (over-all) balance of payments, because policy was assumed to be always successfully aimed at keeping the (over-all) payments in balance – e.g. by a continuously variable exchange rate'. Our choice of assumptions was not, therefore, made without due reflection, and after reading Professor Morgan's article with great care I feel bound to say that I would not, if starting again, make any serious changes – given that we were analysing conditions in the period 1955 – 64 for the U.K., not attempting the impossible task of producing an analysis of universal applicability.

I would however like to add the following points, which are largely intended to clarify either the nature of the assumptions or the reason for making them:-

(a) It is a plain fact that Britain was experiencing balance of payments problems, of varying intensity, throughout the whole of the period considered and the subsequent years. To choose a set of basic assumptions which would preclude the existence of a prolonged period of such difficulties would clearly be wrong.

(b) In particular, the maintenance of the exchange rate at $2.80 to the £ was clearly both an objective and a fact. I see no usefulness in Professor Morgan's statement (page 604) that 'there must be an exchange rate which would generate exports sufficient to cover any level of overseas investment'. We are concerned with the effects of overseas investment on the balance of payments under conditions which in fact applied, not with prescribing measures to cure the entire balance of payments problem (which certainly cannot be attributed to direct investment overseas as sole cause).

(c) It seems to me quite clear that the major preoccupation of the British Government in its macro-economic policy was with full employment: what we are effectively assuming is that the effects of its measures to secure this on prices and incomes, or on availability of goods to meet export demand, would have been much the same, whether or not the level of overseas investment had been a bit higher (or a bit lower). This seems a rather modest

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[1] See Interim Report, page 30 and footnote on page 28.

> assumption, which hardly justifies Professor Morgan's formidable strictures, but it would have been better to make clear that we only needed to assume that the position would be the same in either case. I must apologise for having written point (e) in the list of assumptions, both on page 28 and on page 169, as if there would be some specific measures taken by the government as a reaction to the change in overseas investment, whereas in fact the government's policy is directed to meeting the totality of the circumstances prevailing or expected, in which the changes in direct investment overseas are only one minor item. I must also apologise for an incautious use of the phrase 'maintain full but not over-full employment' on page 168 (though I could plead in mitigation that this was only in the introductory part, before the assumptions were stated precisely).

In the application of the assumptions – as opposed to their nature – I am happy to record agreement with Professor Morgan about the need to consider indirect repercussions on the demand for U.K. exports, in cases where the investment abroad would not otherwise have been done by a foreign company: this is the matter discussed in Chapter XIX. On the other hand he seems to be flying in the face of the evidence when he attempts to introduce scope for 'market forces' by referring to 'decisions by a British company to spend money abroad rather than at home': as already indicated, virtually all companies with which we discussed the matter insisted that such decisions were extremely rare, and of no quantitative importance. To my mind, this matter is in any case swallowed up by the overriding assumptions about full employment policy, but if one believes in making an analysis on some other assumption – e.g. a constant quantity of money – one must realise that the reactions from decisions to invest abroad can only be indirect.

# XXI Some Notes on Statistical Procedures

*This chapter deals largely with technical points. Section F contains important results which follow from a changed method of allowing for the fall in the value of money, but readers who are not interested in technical points can omit the rest without losing the thread of the argument.*

In the previous chapter we have been discussing various points of principle, according to which the objectives of the analysis have to be defined, and also assumptions which are to be made about the 'things which should be assumed equal', or other matters concerning the working of the economy. In this chapter we proceed to the more prosaic job of discussing the methods by which we should attempt to arrive at statistical measures of the things which have been defined in accordance with those principles and assumptions: as before, the object of the chapter will be partly to describe more fully what was done, and partly to set out at greater length the reasons for adopting the procedures which were chosen.

## A. Undistributed Profits and the Calculation of Profitability

In the Interim Report we followed the normal statistical procedure in matters connected with the balance of payments, whereby the undistributed profits of an overseas subsidiary or branch are treated as an incoming item in the current account, and a corresponding outgoing item entered in the capital account as further investment in the subsidiary. Accordingly, in calculating the profitability of an overseas investment, we took the profits for any year, whether distributed or not, and divided them by the book value of the net assets, including those assets which had been financed out of the undistributed profits of previous years.

I have no doubt in my own mind that this is the proper procedure to follow in an investigation of this kind, and have had plenty of support from people who are expert in such fields. Nevertheless, I have met a steady trickle of opposing views, which might be summarised in this sort of way: 'if you are concerned with the effect on the balance of payments, then you should simply take the original remittance of funds from the U.K., plus any subsequent capital remittances, to represent the denominator of the fraction, and for the numerator you should take the profits remitted in cash in each of the later years.' Sometimes it has been thought reasonable to include in the capital supplied from the U.K. the value of any goods which were sent by the parent company without charge (e.g. machinery or stocks of component items), but the 'strong' view which I sometimes encountered insisted that one should put in nothing but actual cash transfers.

This view has been put forward by people (amongst others) who have been extremely cooperative in supplying the information on the basis which I requested, and I would like therefore to set out some of the reasons why I do not regard this approach as correct for the purpose of this report – even though the information is sometimes very interesting in itself.

Firstly, in the proposal usually put forward, the upshot would depend enormously on the form of the transactions in the intervening years since the venture was started, since this can greatly influence the size of the denominator which constitutes 'capital remitted from the U.K.' Thus in the intervening years it would be entirely possible that one enterprise had paid out substantial cash dividends, and obtained additional share capital for expansion when necessary from the parent; it would then appear as having a much larger amount of capital to put into the denominator than a second enterprise, which might have paid no dividends for the whole of its first fifty years, and so show in the denominator only an initial remittance of a few thousand pounds. If the profits of the two enterprises had been the same in every year of their history, and the initial capital had also been the same, then it would be very misleading to show the second one as in any sense 'much more profitable' now than the first.

Various possibilities are available for removing such an anomaly, but they all involve the statistical difficulty of requiring data for every year back to the start of the enterprise, and they also involve considering its entire history as constituting a single 'observation'. Perhaps the most logical would be to apply a 'discounted cash flow' technique to the results, so as to show one single rate of return to represent the entire outcome for the subsidiary's whole life: this is likely to mean, however, that the results for a long-established subsidiary are very much influenced by 'ancient history', and therefore of rather limited value as a basis for deciding on present policy.

Secondly, this sort of approach may well make nonsense of any attempt to bring into the picture any enterprise which was started after the war, if it followed a policy of retaining all its profits (or nearly all of them) to cover expansion. If no dividends have in fact been declared, the return on the capital invested would, on the suggested 'cash' basis, come out at zero, which is not a very meaningful result: conversely, if a second company which had developed in exactly the same way had pursued a policy of full distribution, and sought additional capital as necessary, then it would show a normal rate of profit.

In view of the large amount of capital which has been invested in the post-war years, either in new enterprises or in major expansions, any system which rendered their figures useless or misleading would be disastrous for the enquiry: in particular, since in the last resort one is mainly interested in the results of new investment (which can be done on a bigger or smaller scale), this would mean throwing away the most valuable type of information.

Thirdly – and more positively – it seems to me right to take credit for profits which have been earned, even though they have not been distributed. In the great majority of cases any retention in the overseas subsidiary represents a deliberate choice by the company: if the profits had been distributed, the subsidiary would probably have wanted to obtain additional capital for expansion, so that retention at least avoids a debit item in the U.K. capital account.

In connection with the above, we were a bit worried about the possibility that retention might have been enforced by the overseas government, either legally or through moral pressure, but our enquiries pointed to the amount of such truly involuntary retentions as being only a small fraction of the whole. One reason for this was that countries which were imposing restrictions were often ones in which *either* the overseas companies had little in the way of profits which they could afford to remit (because inflation was reducing their true profits to a low figure – see Appendix D) *or* the subsidiary wanted to do a lot of expansion to meet a booming demand. The simple practice of taking credit for the whole of the (post-tax) profits is not *exactly* what one would like to do in cases where retention is involuntary, but the error involved was small, and would have been very difficult to correct.

In effect, we treated as a credit to the balance of payments something which gave the U.K., through its companies and their subsidiaries, the ownership of more net international assets. What was then done with this extra wealth seems to be a separate question.

Fourthly – and perhaps most decisively of all – the object of the whole exercise is essentially to throw light on the additional income – in the sense indicated above – which would be likely to come to the U.K. if it increased the size or number of its overseas subsidiaries. For this purpose, the best guidance seemed to be obtainable by considering the assets which the subsidiaries would be using, and the profits which they earned. The question whether those assets had been acquired by an original remittance of capital from the U.K., or by accumulation of undistributed profits, seems irrelevant.

Admittedly, the use of book values to represent the assets in use is not ideal, and we made an effort (discussed below) to convert these book values to replacement values. This is, however, a separate matter: one must get better guidance by using the whole of the book values of the assets, rather than taking a very variable fraction of those values to represent the amount originally remitted from the U.K.

## B. Depreciation

In accordance with the philosophy explained above, all the calculations in the Interim Report were done on the basis of profits net of depreciation: although the allowance for depreciation used by accountants is necessarily somewhat arbitrary, this seemed to give the best measure of the addition to the subsidiary's assets as a result of the year's operations. Correspondingly, the book value of the assets to which the profits were related was the value net of depreciation.

Suggestions have been made that this in some sense gives an under-estimate of profitability, or at least makes its impact on the balance of payments appear as arising *later* than it really does. So far as I understand it the argument is apparently that depreciation in the early years of an enterprise's operation will exceed the amount which has to be spent on renewal of the assets in respect of which it is being charged, so that in the early years there is a sum which could be remitted to the U.K. which exceeds the amount of net profits.

This is, frankly, an argument in relation to which I stand in the position 'Now I think that I understand it, now I have lost it again' – partly because different commentators are (I think) making different points – and the following remarks are therefore made rather tentatively. For the reasons described in the last section, I do not feel it right to be concerned with the question whether 'excess' depreciation allowances are remitted to the U.K., or kept abroad to expand the overseas business – any more than with the question whether profits are distributed or retained. Since the great majority of companies showed a rising trend in the book value of their physical assets overseas, even after deducting depreciation, it seems simplest to take the case where the 'excess' depreciation on the first lot of assets is used to acquire additional ones: our profit figure is then designed to measure the average profit, over an indefinitely long period of years, obtained from an investment of £100, including profits earned from these additional assets.

It may well be that one of the main points at issue is simply a matter of words, being analogous to the point which arose in connection with timing effects on page 242 above. I entirely accept the existence of 'excess depreciation' in the sense indicated above, which is familiar to most economists under the name of 'the Domar effect': this has the corollary that, if one defines the conditions strictly enough, one can say that the book value of an enterprise's fixed assets is never so high as at the outset when they are all new.[1] The availability of a flow of 'excess depreciation' is clearly an important practical feature of an investment process, and the problem is to show how it should be brought into the present analysis.

To start with some negative points, it is clear that if one were seeking to explain how *gross* investment overseas is financed, the proper method is to include *all* depreciation as a source of finance, and not simply 'excess' depreciation, since the purchase of replacement machines is counted as part of gross investment.

If, as in our case, one is following the normal practice in the balance of payments field by dealing with *net* investment, then excess depreciation is again irrelevant, but the reason is different. For in calculating net investment one subtracts the whole of depreciation from the purchases (including those for replacement): consequently one could not regard any part of the depreciation as available to finance net investment, when the whole of it has already been subtracted in arriving at the figure for what requires to be financed.

If, then, excess depreciation is irrelevant to a study of either net investment or gross investment, where does its importance lie? The answer is that it is important in its effect on the *composition* of the purchases which can be made. The fact that an abnormally small proportion of replacement purchases is needed when assets are new means that a large proportion of the purchases can be devoted to purchases for expansion – which is clearly important, since it is these which primarily influence the capacity of the subsidiaries to produce overseas. If one took as a definition for 'maintaining capital intact' the maintenance of *production capacity*, rather than some financial magnitude, then we could truly say that excess depreciation was a source of funds for expanding 'capital' – i.e. capacity. This is, of course, just as true for home investment as for overseas investment.

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[1] In most cases, however, the enterprise does not meet the conditions of never expanding its capacity, never becoming more mechanised, never finding an irresistible need for a canteen or car park which was not in the original building, etc., etc.

Perhaps an illustration may help to clarify the argument. Picture a British company starting up an overseas subsidiary in year 1 with initial capital of £100,000. Assuming for simplicity that no capital equipment is bought from the U.K. that would otherwise not be bought, the immediate effect is an increase in the U.K.'s net external short-term liabilities of £100,000. Assume further that no 'renewal' purchases are required in the early years of the subsidiary's existence, and that a cash flow in addition to profits is generated through depreciation which is not required to maintain the operating efficiency of the enterprise. The table below then gives simplified accounting figures, on the assumption that the 'surplus cash' is spent immediately on increasing the subsidiary's capacity – while all profits (after tax) are remitted to the U.K.

Table XXI.1. Simplified effects of net investment of £100,000

(£'000)

| Accounting Items | Year | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| *Subsidiary's book value (end-year)* | | | | |
| Gross of depreciation | 100 | 120 | 140 | 160 |
| Net of depreciation | 100 | 100 | 100 | 100 |
| *Subsidiary's p. and l. account* | | | | |
| Depreciation | – | 20 | 20 | 20 |
| Profits (after tax) | – | 10 | 12 | 14 |
| Effect on U.K.'s financing problem[a] | +100 | –10 | –12 | –14 |

[a] Not counting the financing charge or the continuing effect on exports, etc.

If one counts depreciation (all of which is 'excess') as a return to the U.K., along with profits, the combined return accumulates to £96,000 by the end of year 4, and there is a temptation to say that this is virtually enough to 'pay off' the initial increase in short-term debt of £100,000, thereby removing the U.K.'s financing problem in rapid time. It is clear, however, that if this flow is to be counted as a return, it is a return to *gross* investment, which builds up to £160,000 by the end of year 4. In that case, there remains a 'financing problem' outstanding of £64,000. In terms of our approach, which deals solely with assets and profits net of depreciation, net investment at the end of year 4 is unchanged from the initial £100,000, while profits after tax and depreciation accumulate to £36,000, again leaving a financing problem of £64,000. Whichever way one looks at it, the consequence of this particular act of investment is to generate a financing problem of the same magnitude. Inevitably the problem is smaller as a proportion of gross investment than of net investment, but that can be no surprise to anyone.

The profits shown in the table are of course highly conventional: they are shown as rising to reflect the 'bonus' to the enterprise for its ability to use depreciation in the early years for expansion rather than replacement – an effect which would be fully incorporated in our results, but which does not really affect the issue of *gross* versus *net* investment.

## Profitability

As regards the calculation of profitability, our method was to arrive at an average percentage by relating the profits of each year to the written-down book value of net operating assets; the procedure was fully discussed on page 88 of the Interim Report, with an account of its limitations. One group of critics seems, as I understand it, to be arguing that in calculating the profit from a single investment of £100, the proper method is to apply a discounted cash flow technique to the *gross* profits (before deducting depreciation) derived from those assets, without including the profits on the additional assets acquired with the excess depreciation: one then has a finite series of years, instead of an infinite one, but the procedure yields an equivalent (average) rate of profit. It is then apparently argued that the ratio of depreciation to gross profit will be higher in the early years, and that this will lead to a higher return than a technique which uses only the figures for net profits in the way adopted by us.

I do not feel competent to comment on this at any length, but it is clear that the method would be completely inapplicable to the data which we have available. The matter was discussed in the section on 'complications caused by the time factor' on pages 24 – 6 of the Interim Report: we simply do not have (and could not have collected) a time-history of gross and net profits from a single investment. Moreover, I am none too certain whether the method which we used has any inherent downward bias, merely because it uses a simple average for all the years which are available, and does not bring the heavy initial depreciation explicitly into the picture (although of course it serves to reduce the book value of the assets used as denominator when calculating profitability). If one is anxious to give more weight to the early years in striking the average one would also have to take account of the fact (discussed in Chapter XVII) that the profitability of new ventures is low in the early years.

A further point which seems to be included in this group of criticisms rests on the view that accountants' depreciation is normally *excessive* as a measure of the wearing out of capital, which would mean that our figure for net profitability would be too low, even though this excessive depreciation also reduces the denominator as well as reducing profits. This is a matter on which we collected no evidence.

Finally, it may be useful to say that in so far as depreciation allowances are remitted to the parent company and held as a deposit on book-entry with the parent, the point discussed in the next section applies.

## C. Accounts with the Parent Company

In computing the U.K. stake in an overseas subsidiary or branch, we followed the general practice of including in it any debt due from the overseas subsidiary or branch to the parent group, irrespective of the origin of that debt: thus we include amounts due for goods which had been supplied to the subsidiary, even though these might – at least in part – be regarded as ordinary trade credit, on which the parent would not expect to earn interest if the goods had been supplied to an independent company. Similarly, in the computation of 'net operating assets', we subtracted current liabilities to anybody other than the parent group, but did not subtract liabilities to the parent group, however those might be described in the books of the enterprise.[1]

This procedure has been criticised – and quite rightly – as leading to some exaggeration of the amount of capital to which the profits of the overseas subsidiary have been related. We originally hoped to do better than the normal practice (which is as indicated above) by getting some distinction between 'normal trade credit' on the one hand and what is virtually the provision of capital on the other. We discussed with the pilot companies whether it would make sense to ask for a division of the liabilities to the parent company between those bearing interest and the rest, in the hope that the former might be roughly equated with 'capital' and the latter with 'trade credit'. We found, however, that practice in this matter was extremely diverse, and provided no reasonable method of making a meaningful distinction. Particularly in the case of branches, there was no legal distinction between credit of any kind and 'capital', since there was no legally separate entity; consequently any attempt to divide the parent's interest in the branch between capital and trade credit would be entirely dependent on the book-keeping conventions adopted, and practice varied too greatly to make the distinction of any use.

The other side of the coin was also important in a number of cases: the overseas subsidiary or branch sometimes used the parent company virtually as a banker, with which any liquid balances in excess of the minimum working balance needed for current purposes was deposited, even though it might be needed again overseas in quite a short time. In arriving at the U.K. stake and the figure for net operating assets, we subtracted any balance which was due from the parent to the subsidiary, again without any reference to its origin: it might, for example, represent profits which were being accumulated during the year, which would otherwise appear as a balance with the subsidiary's bank, and count as part of its net operating assets. It might also – reflecting the discussion in section B above – represent the remittance of depreciation funds which had accumulated, and so produce the result that profits would be related to a smaller amount of capital than would apply if those funds had been kept by the subsidiary. Any interest allowed by the parent on those balances would still count as part of the income of the subsidiary, so that the profitability might be exaggerated in this way.

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[1] The procedure adopted was described on pages 17 – 18 of the Interim Report, and given in more detail in Appendix A.

As it proved impossible to collect the statistics on a basis which would approximate more closely to the one which was economically desirable, we had meant to apply some simple statistical approaches to set limits to the influence of these deviations on the figures for profitability as actually computed; this operation unfortunately got squeezed out in the hurry to produce the Interim Report, and this section is concerned to make good the deficiency. Fortunately it shows that the quantitative effect of the factors is relatively small.

On the amount of credit from the parents which should be subtracted from the U.K. stake (or net operating assets) to reflect 'normal trade credit', we can make a reasonable estimate by looking at the figures for the amount of goods supplied by the parents to the subsidiaries, whether as 'input items' or as goods for re-sale. The average amount supplied per year to the fifteen specified countries was £53 million for input items and £110 million of goods for re-sale. We did not, unfortunately, make any enquires about the number of months' credit which should be allowed 'in the ordinary way of business', but if one takes three months' credit as a rather traditional figure, this gives a total of £41 million; by way of comparison, the average amount of the U.K. stake in the fifteen countries was £989 million, and the average amount of the net operating assets was £1,281 million. A correction to subtract the estimate for normal trade credit would thus make some difference, but not very much: those who know more about the subject can make a deduction on the basis of any other number of months' credit which seems to them more appropriate.

On the other side, the total of amounts due from the parent to the overseas subsidiaries etc. in the fifteen countries was some £26 million. A very little of this might be regarded as 'normal trade credit' from the subsidiary to the parents, in respect of materials sold to the parent: we can however get an extreme view of the maximum adjustment which might be made on this account by adding the whole of the amount due from the parents to our figure for the capital used by the subsidiaries – and so largely offsetting the other item.

## D. Replacement Cost and Stock Appreciation

For the most part, the Interim Report had to work on the basis of ordinary accounting conventions, under which no allowance is made for the fact that the value of money has been gradually declining during the post-war period. The resultant figures had of course the virtue of being on a familiar basis, and so readily comparable with other series of 'accounting' profits: but they nevertheless exaggerated the profitability of overseas investment in three ways, in comparison with what an economist regards as 'true' profitability, and it is important to get the issues straight. The matter was discussed on pages 53–5 of the Interim Report, which made clear why it is necessary to calculate 'true' profitability on the basis of replacement cost, and described our tentative attempt to calculate this for the sample as a whole. Various commentators have, however, objected to the use of such figures (sometimes, apparently, without studying the explanatory passage), and at the risk of some repetition it seems useful to go over the ground afresh.

First, then, the three main reasons why conventional profits exaggerate true profitability:–

(a) First, the value of the fixed capital assets which are used in earning the profits is expressed at historical cost, and so the depreciation charge, as conventionally calculated, is too low: the sum of such depreciation charges over the life of a machine will not pay for its replacement when it is scrapped. Hence the profits, net of depreciation, are too high.

This point is not 'a mere matter of academic theory': under such circumstances many eminently practical businessmen revalue their fixed assets from time to time, so as to make their depreciation charges more realistic. In part this serves as a defence against shareholders who would expect the exaggerated profits to be reflected in bigger dividends; but the businessmen also do not tire of urging on governments that it is these increased charges which should be taken into account in arriving at profits for taxation purposes or for fixing prices.

(b) Secondly, the profits are exaggerated if – as is usually the case – they are calculated by adding the cost of the closing stock to sales and subtracting the cost of the opening stock, (except where the market value happens, despite the generally rising trend of prices, to be lower than cost). If prices of the items stocked are on the whole rising, this creates an 'inventory profit' from the increasing value attached to stocks of essentially the same size and character.

Here again this is not simply a matter of academic theory. Various devices are adopted by businessmen to cope with the situation, some of which are reflected in the basic accountancy figure shown for profits, but most of which represent an allocation of profit to a 'stock reserve' of some kind. In the main, therefore, these efforts are not as helpful to the economic statistician as those of the companies which revalue their fixed assets, since the latter do bring the reported profit figures nearer to the desired basis.

Once again, the inclusion of 'so-called inventory profits' (*alias* 'stock appreciation') in accounting figures is a point of which thoroughly legitimate use is made by businessmen and their advisers when it is a matter of arguing about price-fixing or taxation.

(c) Thirdly, when the profits have been calculated they have to be related to the value of the assets, and in the latter figure the fixed assets are usually understated, because they are valued on the basis of historical cost. The danger of regarding this as the proper procedure can be seen most easily with the aid of an admittedly extreme historical example. A German trader in 1923 who said on this basis that he had secured a profit – even after making adjustments under both (a) and (b) – of ten million per cent on his capital would have been making a historically accurate statement (given the definitions); but it would not have been very helpful as a guide to the profitability of that type of investment. Similarly, if the U.K. wishes to compare 'what it gets back' with 'what it put in', both figures should be expressed in terms of money of broadly similar purchasing power.

## Treatment in the Interim Report

In the Interim Report the figures were, as stated above, mainly given on the basis on which they were collected, with no adjustments to allow for changes in the value of money. So long as one realises that the figures are exaggerated in this way – and perhaps compares them with others which are subject to a roughly similar amount of exaggeration – such figures are, of course, a great deal better than nothing; they also serve a useful purpose for cases where the money for the overseas investment has been borrowed abroad (as opposed to obtaining it by an issue of equity shares), since then the repayment will be fixed in money terms, and money serves as the basic yardstick.

As explained on pages 53 – 5, however, we did make a rough adjustment for the sample as a whole, to allow for the under-valuation of fixed assets (points (a) and (c) above). Since we hoped to do something better in the Final Report, the treatment was not explained in detail; but in fact we have not been able to improve on that tentative approach. A little further explanation seems necessary therefore, which can now be related to the final set of figures used in this Report. As the basic data which we used (giving a revaluation on the basis of written down replacement cost) all in fact related to subsidiaries of manufacturing companies, we have applied the procedure to the total for that group rather than to the whole sample: there are obvious statistical difficulties in applying the concept to mines and plantations.

In view of the limited amount of data, the simplest approach was used, under which it was assumed that the replacement cost of fixed assets was the same percentage above the book cost for each of the nine years used in the calculation, and for this purpose we used the average of the two years for which we have figures. The book value of the fixed assets for each year (and hence the average for the nine years) was converted to replacement cost by adding 21.5 per cent, and the same was also done to the figure for depreciation. The figures for current assets were left unchanged.

In this way, the average figure for net operating assets was increased from £1,343 million to £1,489 million, and the figure for pre-tax profits after depreciation was reduced from £192 million to £176 million. It should be noted that in each case the figures for each year are expressed on the basis of that year's replacement cost; we did not attempt to convert the figures to a constant price basis, since we had collected no information of that kind.

As a result of the above adjustment, the average rate of pre-tax profits as a percentage of net operating assets was reduced from 14.3 per cent to 11.8 per cent.

## Inventory Profits

It was pointed out on page 54 of the Interim Report that we had made no attempt to eliminate the inventory profits so that the figures for profitability which we calculated are in that respect comparable with the crude figures derived from accounts for companies operating in the U.K. We have not attempted to collect any data specifically for this purpose – a point on which we are probably at fault, although it would have imposed a considerable strain on the reporting companies if we had tried to collect such data from them. Nevertheless, it is important to know the order of magnitude of the sums involved.

One can get a rough idea of this figure by starting from the average value of stocks and work in progress held by the subsidiaries of manufacturing companies over the nine years from end-1955 to end-1963, which was £654 million. If one argues by analogy with conditions in the U.K. – as has some plausibility, since the accounts are expressed in sterling – one could say that the average amount of stock appreciation recorded in the National Income Blue Book (Table 71) for all traders, taken over the years 1956–64, was £165 million, which is equal to 1.72 per cent on the book value of the average stock at the end of the nine years 1955–63. This percentage is, in any case, a fairly reasonable one to take as indicating the order of magnitude of the price-rise, and it implies that stock appreciation would have averaged about £11 million a year for our sample.

If we subtract this £11 million from the figure of £176 million found above as the profits of the manufacturing subsidiaries after adjusting the depreciation allowance, we have a net figure of £165 million as the average profit on the basis of replacement cost and after subtracting stock appreciation.

This gives an average rate of profit on net operating assets of *11.1 per cent* before tax, or *5.3 per cent* after tax.

To see the post-tax profits attributable to the U.K. stake, we have to recognise that the amounts paid out as interest and dividends are a historical fact, which is not altered by a recalculation of profits, and so are the amounts paid to the overseas goverment as taxation: the whole burden of the adjustments has to fall on undistributed profits, including those attributable to minority shareholders. A certain amount of estimation was needed to do the apportionment, but the average profit attributable to the U.K. stake (whether distributed or not) emerges as £63 million per year.

The value of the U.K. stake needs to be written up to take account of the revaluation of fixed assets, and for the average of the nine end-years 1955–63 it becomes £1,145 million.

On the basis of replacement cost, therefore, and after deducting stock appreciation, the average post-tax rate of profit on U.K. stake was *5.5 per cent.*

## E. The Notional Financing Charge

As we have explained in various places in this report, the logic of our model implies that an average increase in net operating assets overseas of £100 is financed to the extent of £89 by additional (net) external obligations of one kind or another; and the servicing of these obligations is a factor of which account must be taken in assessing the effect on the balance of payments caused by overseas investment. On page 237 we explained why it is necessary to employ a financing charge. Perhaps it is worth repeating, however, that our procedure does not, as some critics have suggested, 'attribute' balance of payments deficits to overseas direct investment. Even for a country with a persistent surplus on its balance of payments it would be right to allow for a financing charge, since such a country would still have alternative uses for the funds.

When discussing the matter on page 102 of the Interim Report, we hesitated to select a single rate of interest to cover the mixture of financial obligations making up the £89 (to take the figure used in this chapter). On page 127 of the Interim Report, however, for the purposes of the 'over-simplified calculation', we adopted a rate of 4½ per cent, based essentially on the average yield on U.K. Treasury Bills over the period of our study and therefore relevant to overseas holdings of sterling. In this section we give some consideration to the composition of the £89 and so to the reasonableness of the 4½ per cent. The discussion relates to the period of our study – when on average interest rates were a good deal lower than they have been subsequently – and is necessarily based on rather limited information.

The data collected on our forms enable us to say something about outside finance raised by the companies in our sample themselves. We have explained already that sources outside the group – minority interests and non-current liabilities – accounted for 40 per cent of the financing of the increase in assets under U.K. control. This is not quite the same thing as saying that 40 per cent of the financing was secured by raising funds abroad, but the discrepancies are small and at least partially off-setting. The funds raised in this way do, of course, include that part of the undistributed profits of the overseas subsidiaries which was attributable to outside shareholders.

The post-tax rate of return to minority holdings and the interest paid on non-current liabilities have been given in Table XVIII.2, and averaged 9.0 per cent and 3.9 per cent respectively: the latter figure is really an under-estimate, for reasons explained in conjunction with the table. As these two sources of outside finance are of approximately equal quantitative importance, the average rate of return on the two together comes to 6½ per cent, after deducting overseas tax where applicable; this must be considered a minimum figure.

We now move away from the realm of the individual companies to a more general consideration of the external liabilities of the nation as a whole. We have seen that in the average case an increase in net operating assets of £100 required external financing of £89, and that of this the companies undertaking the investment arranged about £40 themselves. It follows that some £49 remained as an addition to the general financing problem of the U.K. We cannot, in the nature of the case, say how the £49 would have been composed, since monetary movements in the balance of payments cannot be identified with particular items in the other accounts; all that is possible is to consider the various elements that would have made a contribution.

*Sterling holdings* have already been mentioned; so far as this important item is concerned we continue to believe that the appropriate rate of interest is about 4½ per cent. It is true that a small minority of holders might have had to pay U.K. tax on the interest received, but, offsetting this, some holdings would have been in longer-term securities yielding a higher return than Treasury Bills.

Interest payable on additional *borrowing from the I.M.F.* varies according to how much has been borrowed already and the length of time taken to pay back the money. A typical rate for our period would be between 2 and 2½ per cent: for example, the average effective rate of charge levied by the Fund on its holdings of a member's currency in excess of that country's quota would be 2 per cent for a holding of up to 100 per cent of quota for 1 year, or 2½ per cent for a holding of up to 50 per cent of quota for 3 years.

Another factor that is relevant is the rate of return foregone by reducing our average holding of *portfolio investments*: at times the operation of the investment dollar market ensured that a part of direct investment was more or less directly financed by such disinvestment, but in any case one can argue that permission to increase dollar holdings would have been granted more freely if the outflow in direct investment had been smaller. To throw some light on this we calculated the average return to be had by investing a constant amount in each year of our period in a representative collection[1] of U.S. stocks. The average return by way of dividends was 4¼ per cent, from which withholding tax must be subtracted, leaving 3½ per cent; the inclusion of capital appreciation however raised the figure to some 13 per cent, and this is highly relevant for comparisons which start from 'combined returns' from direct investment, which include capital appreciation.

These data are obviously fragmentary and not very satisfactory, but it seems to us clear that if one is seeking a conventional rate of interest, excluding capital appreciation, the answer over the whole £89 should be at least 5 per cent. Thus we have a rate of at least 6½ per cent on the £40 of 'company' finance, and on the £49 of 'national' finance the rate can hardly be less than 4 per cent, in view of the great importance of the sterling balances: the weighted average of these minimum figures is rather over 5 per cent.

We are seeking, however, a figure to set against the 'real' profit figure of 5.3 per cent established on page 275 above, which was calculated on the basis of replacement costs and after eliminating inventory profits. These adjustments are designed to ensure that the real value of the assets is maintained, and part of the conventional profits figure is subtracted to provide for that: we must clearly adopt similar principles in respect of the payments on our foreign obligations, and in a period of rising prices this means that part of the income payable on them should be subtracted, as an off-set to the reduction in the 'real' value of the capital liability.

The logical principles needed to make such an adjustment for a mixed bag of external claims are far from clear, but after trying various approaches I concluded that the most reasonable round figure to use is 3 per cent – and in these matters we can only hope to deal in orders of magnitude.

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[1] The 200 stocks covered by Moody's composite index of share prices.

## F. The Over-simplified Calculation

In the previous sections we have arrived at a lower figure than was used in the Interim Report both for true profits and for the financing charge: clearly one wants to know what this implies for the net continuing gain to the balance of payments on current account, which was calculated on page 127 of the Interim Report. Since the changes on both sides reflect a more complete allowance for changes in the value of money, it is not surprising to find that the net gain is little affected: in terms of round figures indeed – which are all that are legitimate – it remains unchanged at £4 per annum.

In the Interim Report this total was arrived at as the sum of three items, which may be conveniently described here in reverse order. One represented the additional exports of goods and services obtained as a result of the overseas subsidiaries having an extra £100 of net operating assets; the second took the (small) part of these assets which had effectively been supplied by the U.K., and gave a figure for the profit earned on that amount, *plus* the reduction in U.K. imports resulting from the fact that a lower level of capital in the U.K. would mean lower production and so less imported materials; and the third took the capital which had been secured in one way or another overseas, and gave the difference between the profits earned on that sum and the external financing charge payable in respect of it.

This is an analytically logical way of arriving at the figure, but experience in explaining it has suggested that the procedure would be easier to follow if the treatment were revised, so as to start with the profits on the whole £100 earned abroad, then to subtract the financing charge on that part of it which is raised externally, and finally to have a combined 'trade' item to cover the additional exports of goods and services *plus* the small item for reduced imports of materials caused by a lower level of production in the U.K.

On this basis, and using the revised figures for subsidiaries of manufacturing companies, we can show the gain to the current account of the balance of payments as made up of two positive items and one negative one, as follows:–

| | | |
|---|---|---|
| (a) | Profits earned (after deduction of overseas taxes) on £100 of additional net operating assets in the overseas subsidiaries | about £5¼ |
| (b) | *Subtract* the external financing charge on £89 of additional external obligations, amounting to | about £2¾ |
| (c) | *Add* additional exports of goods and services, plus the reduction in U.K. imports resulting from the fact that production in the U.K. is rather lower | about £1½ |

We should perhaps repeat the cautionary note given on page 127; the third component would become very small if one changed the basic assumption about what would happen to production overseas, if it were not done by U.K. subsidiaries, from '100 per cent substitution by non-U.K. companies' to '90 per cent substitution'. The reasons behind this statement are explained on pages 110–11 of the Interim Report.

It is useful to produce a companion set of figures for the continuing effect on the current account of the balance of payments, relating to an increase of £100 in U.K. stake – for which we assume that the amount of outside finance accompanying the £100 will be the same as in 1955–64 (as shown in Table XVIII.1 on page 236).

In round figures this picture may be set out as follows:-

| | |
|---|---|
| (a) Post-tax return on £100 of U.K. stake | £5½ |
| (b) External financing charge on £82 of 'national' external obligations | £2 |
| (c) Trade effects | £2 to 2½ |
| Total in round figures, about | £6 |

Two technical points need to be noted in connection with the above:-

(i) As the overseas subsidiaries are now envisaged as having a bigger expansion the amount of the 'initial effect' on U.K. exports is raised to £18: we therefore get this as the amount of capital effectively supplied from the U.K., and also as the reduction in the internal stock of assets.

(ii) The amounts actually payable to oversea capitalists on the debentures or minority shares issued by the subsidiaries have already been subtracted from the subsidiaries' profits in arriving at the return attributable to the U.K. stake; consequently the external financing charge on the £82 in item (b) has to be calculated at a rate corresponding with the 'national' rate described in section E, above, which is lower than the over-all average of 3 per cent used for the 'operating assets' computation.

## G. Services

There has been a certain amount of misunderstanding about the treatment in the Interim Report of exports of services, and to some extent we are to blame for not making our presentation sufficiently clear. In particular, some readers have imagined that one or two of the figures given were more comprehensive than they in fact were.

For *freights* and *management services* our procedure is explained in Chapter XII and Appendix E, and we have little to add, except to say that rough as the methods used were we have not been able to improve upon the figures. For *licence fees* we now have a check on the results given by the rule-of-thumb approach outlined in Appendix E, since the returns received on Form 3 – described in Appendix J – gave direct information from companies on the subject. The new material lends support, at least in total, to the earlier results, although we have revised the figures for some individual industries quite significantly. This topic is discussed in Part V.

Our figures for the three foregoing items can be regarded as being comprehensive and we doubt whether further research would lead to significant changes, at least for the sample as a whole. The fact that they have attracted little criticism or comment encourages us to feel that they are not seriously wide of the mark, but we should perhaps repeat the statement made on page 114 of the Interim Report that the figure for the net gain may have an upward bias.

In Tables XII.4 and E.3 we gave a column for *other services*, and surprise has been expressed at the smallness of the figures. These figures were qualified as being 'so far as we have assessed them' and described in the text as incomplete, but we should have emphasised more strongly that they were not based on a thorough-going survey of subsidiaries' buying habits in the way that figures for exports of goods were. The 'other services' appearing in the tables were composed of a few rather special items arising from particular companies' types of business.

Why was this procedure followed, what was excluded from the picture, and how serious were the omissions? Before answering these questions it is necessary to consider again briefly both the nature of the information we were able to collect from companies and the philosophy underlying our approach. At the pilot stage of the enquiry it became clear that it was going to be extremely difficult for many companies to provide a ten-year record of subsidiaries' purchases of *goods* from the U.K. – even though in many cases the great bulk of them came from the parent company; to do the corresponding job for services would often have been impossible. But the compilation of the ten-year record was required primarily as a benchmark against which to work out 'effects', i.e. the difference between actual purchases and those to be expected in the alternative position – and two considerations pointed to these effects being small for services as compared with goods. First, for the sample as a whole, the actual flows of services would be small compared with the flows of goods; secondly, the U.K. is an extremely important international supplier of services, and would be very likely to retain much of the business in services in the 'alternative position'. Information on services was thus not asked for as part of our general approach to companies.

Broadly two kinds of U.K. services appear to have been left out of the tables on services referred to above. The first variety consists of insurance and other financial services, which would probably have been purchased by a large proportion of all the overseas subsidiaries in the sample. The second is a mixed bag of miscellaneous items arising essentially from the employment of U.K. expatriate staff, in cases where an alternative producer might have employed people of a different nationality; it appears to have been quantitatively important only in a small minority of cases.

So far as insurance is concerned the point mentioned above – i.e. that the U.K. is an extremely important international supplier of financial services – seemed to us to carry a good deal of weight. Moreover, as was mentioned on page 113 of the Interim Report, the relevant measure of the size of insurance business is premiums paid *less* claims, with even the remaining 'service element' having an import component. All in all, although there can be no doubt that British ownership of overseas assets has a positive effect on 'exports' of insurance services, the effect seemed likely to be small. The same argument applies to banking and other financial services.

Some companies that had subsidiaries with a substantial proportion of expatriate U.K. staff claimed that the U.K.'s invisible account benefited in various other ways from British ownership of the companies in question. Among the factors mentioned were pension contributions to funds organised in the U.K. (the staff in question most frequently returning to Britain on retirement), remittances to the U.K. for family expenditure, and preference for British air and steamship lines for travelling to and fro. For particular subsidiaries the amounts involved would have been appreciable in relation to other items, but the number of such subsidiaries was extremely small. Furthermore, they tended to be sited in recently independent Commonwealth countries, for which links with the U.K. are in any case very strong, so that U.K. personnel might have been employed in any case. For the field as a whole, therefore, we came to the conclusion that the likely effects were probably small.

Thus our total figure for services is incomplete in various respects, but we do believe that the quantitative significance of the exclusions – always bearing in mind that we are speaking of 'effects' – is not very great. Moreover, as we noted above, our impression is that the figures for some of the service categories which we have included probably have an upward bias, so that we feel unable to express a view about the probable direction of any bias in the total.

# XXII Alternative Attempts to Estimate Export Effects

This chapter reports two attempts to assess the continuing effects of direct investment overseas on British exports by methods which were not used in the Interim Report. The first was forshadowed in that report, since we collected from the respondent companies information in Table V of Form 1, according to which the companies divided their production in each overseas country according to the types of goods produced, and also recorded their exports to that country for the corresponding categories. The analysis of this data proved difficult, and was put on one side to appear in the Final Report.

The second approach is of a quite different character, and might indeed be said to be methodologically at the other extreme; instead of breaking down the figures for each company by commodity group, as the first approach does, we take the official statistics for the aggregate export of manufactures from the U.K. to a number of other countries, together with the figures for direct investment in those countries, and study the various relationships which can be deduced. As the same procedure can be adopted for the United States, we have done that also, so that one can both compare the results for their own sake, and also get a general test on the way in which the method works.

Finally, we have added a brief third section about a publication on the effects of overseas investment by American manufacturers, which arrived after this chapter had been completed.

## A. Use of More Detailed Statistics

It was decided when the original questionnaire for the study was being drawn up that some information should be obtained from companies on their overseas production and their exports from the U.K., classified by commodity (or 'category of goods'). The hope was that more detailed information of this sort would help to answer the important question of the effect of a company's overseas production on its export effort in the U.K.

The questionnaire sheet – Table V – and instructions for collecting this information appear in section B of Form 1, which were reproduced in annex 2 of Appendix B. Companies were invited to report for each country – of the selected fifteen – in which they manufactured at some time during our period: no figures were required in cases where a company did not manufacture locally. Thus, Table V was not applicable to ventures engaged purely in mining or materials supply.

The choice of categories of goods was a pragmatic one in that it depended very much on what could be readily provided from existing records. The commonest procedure was that three or four principal types of goods were given, comprising the bulk of a company's overseas production. Alongside these were added figures for comparable goods exported by the parent company from the U.K. Some companies reported ten or twelve categories and others only one or two, but this was not necessarily a guide to the homogeneity of categories, which depended also on the diversity of the overseas activities covered. A good deal of the information reported was usable, but in general the categories are broader than was really desirable. This is undoubtedly a source of weakness in the exercise, but the response would have been seriously diminished if we had tried to insist on a more elaborate classification of goods.

In checking to see how far information reported in Table V agreed with that reported in the corresponding questions in Table III, two points of some importance emerged. Firstly, companies frequently reported considerably larger exports of finished manufactures to 'Country X' in Table V than their subsidiaries' *purchases of goods from the U.K. group for re-sale* in the appropriate Table III. It was quite common for the former to be several times the latter, indicating that many U.K. groups exported substantial quantities of finished goods to countries where they had local subsidiaries without sending them through their subsidiaries. This need not imply that U.K. companies compete against their overseas subsidiaries in overseas markets: indeed we were frequently assured that this was not the case. It does however suggest that the U.K. parent commonly sells in markets which are different from those of its subsidiaries, in terms either of products or geographical regions. This type of situation presented no difficulty for the present exercise provided that a proper distinction had been made between categories of goods in Table V, but it did reduce the usefulness of information given in rather broad categories, as much inevitably was, and had to be borne in mind when attempting to analyse that information.

Secondly, it emerged that there was an important number of cases in which totals of *components, semi-manufactures etc.* in Table V added up to considerably less than *purchases of input items from the U.K. group* in Table III. Our intention was that components etc. should be reported in Table V if they were the sort used as inputs by the subsidiaries, but this instruction was not made as clear as it should have been, and was difficult to interpret in a number of cases; as a result the Table V information on components etc. is defective on this account in possibly one-fifth of cases.

## Comparison with Published Statistics

One approach to the analysis of Table V information consisted of seeing whether anything could be learned by combining it with published statistics of production and trade. A pilot exercise was done for three of the most homogeneous categories for which we had good returns – flat glass, rubber tyres and cotton sewing thread – the object being to calculate the U.K. group's share of total imports bought by Country X and its share of local production in Country X for each of a run of ten years. In the case of the first two commodities we had only one manufacturer for each item, but in the second there were two manufacturers – one of whom, however, produced in relatively few countries.

The greatest difficulty in this type of exercise comes from the lack of usable production figures in many overseas countries. We accordingly concentrated on the three which seemed to have the best statistics – U.S.A., Canada and Australia – but even for these there were some serious problems in matching categories of goods, etc.

It would, of course, have been rather fortunate if an exercise confined to three countries had yielded any very clear-cut results. In fact no consistent picture emerged for any one of the three commodities, although the shares of local production displayed large differences between the countries and years, and could therefore be expected to have some perceptible effect on exports, had the real relationship been at all a powerful one. The picture turned out to be very variable, whether we studied the tendency for the U.K. group's exports to be a 'high' fraction of the country's imports in countries in which its share of local production was high (or low), or whether we attempted to work with historical developments through time.

Even if the results of the experiment had been more promising, however, the task of extracting appropriate published figures on the scale necessary to establish a conclusion would have seriously overstretched our resources, and for that reason the exercise was abandoned.[1] Moreover, it seemed likely that we could achieve an equally useful result in a much briefer exercise by working with aggregates of U.K. overseas investment and trade for a large number of countries, and this is what was done, as will be described in section B of this chapter.

## Summary of the Historical Record

We were nevertheless reluctant to make no use whatsoever of the data made available (with considerable efforts by companies) in Table V, and indeed it seemed that the data might, if suitably summarised, shed some light on the estimates of the effect of local production on U.K. exports reached independently by other methods (see Appendix E). The figures moreover, are interesting as a detailed record of 'what actually happened'. We accordingly summarised the information in a variety of different ways and employed a number of simple statistical devices to see whether anything positive could be learned: it is sufficient to say here that the results consistently refused to establish any firm relationship connecting U.K. exports with associated local production, owing to the existence of powerful third forces which we could not allow for properly in the analysis. We shall confine ourselves here to presenting one or two of the more interesting tables of figures and mentioning their salient features.

The upper portion of Table XXII.1 is essentially a cross-classification of 227 usable 'cases' derived from Table V. A 'case' refers to a category of goods reported by a particular company for a particular country, the report covering a period of ten years (usually 1955–64). Thus a case might refer, for example, to I.C.I. selling plastics in Australia, and would consist of ten years' local

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[1] Some idea of the magnitude of the task can be obtained from examining the work of Hufbauer and Adler, described later in this chapter.

Table XXII.1. Share of U.K. finished exports in local market[a] (number of cases[b])

| Average 1955 – 7<br>Average 1962 – 4 % | % | | | | | |
|---|---|---|---|---|---|---|
| | 0 to 4.9 | 5 to 19.9 | 20 to 59.9 | 60 to 99.9 | 100 | Total |
| 0 – 4.9 | 76 | 17 | 11 | 1 | 8 | 113 |
| 5 – 19.9 | 10 | 15 | 5 | 4 | 16 | 50 |
| 20 – 59.9 | 5 | 3 | 13 | 12 | 12 | 45 |
| 60 – 99.9 | 6 | – | 3 | 4 | 5 | 18 |
| 100 | – | – | 1 | – | – | 1 |
| Total | 97[e] | 35 | 33 | 21 | 41 | 227 |
| | £ million | | | | | |
| Exports of finished goods: | | | | | | |
| Average 1955–7 | 4 | 8 | 13 | 29 | 16 | 69 |
| Average 1962–4 | 8 | 6 | 12 | 16 | 14 | 56 |
| Local production: | | | | | | |
| Average 1955–7 | 513 | 66 | 18 | 8 | 0 | 605 |
| Average 1962–4 | 814 | 104 | 42 | 27 | 69 | 1,056 |
| Change in exports[c] % | +52 | –36 | –3 | –79 | –27 | –23 |
| Change in local production[d] (%) | +37 | +37 | +56 | +72 | +100 | +43 |

*Notes*: Figures derived from data in Table V.

a Local market equals a group's exports of finished goods from the U.K. to Country X *plus* its local production in Country X.

b A case represents one category of goods reported by a particular U.K. group for a particular country.

c Change in exports, 1962–4 less 1955–7, as per cent of exports 1962–4.

d Change in local production, 1962–4 less 1955–7, as per cent of local production 1962–4.

e Includes 13 cases where the local market was zero in 1955–7.

production by I.C.I. alongside ten years' exports of plastics by I.C.I. from the U.K. Initially we started with about 350 potential cases but a large number were discarded because the data proved to be defective for one reason or another.

The 227 usable cases are classified by the share of U.K. exports in the company's 'local market' in the first three years of the ten-year period (reading across the table), and in the last three years (reading down). By using averages for three years it was possible to reduce the influence of freak figures – a step which was very necessary in this exercise. It should be noted that 'local market' here is defined as local production by the company's subsidiaries in Country X *plus* its exports of finished goods from the U.K., production being valued at local selling prices and exports at U.K. f.o.b. prices. The figure is consequently something of a hybrid, but nevertheless good enough for our purposes. It should further be noted that, in making the classification, U.K. exports of semi-manufactures, components, etc. were excluded. Thus the classification turns on the share of U.K. exports of *finished goods* in the group's local market, and any conclusions drawn from it relate only to finished goods.

Values of local production and finished exports are given in the lower part of the table. The 227 cases represented a combined local market for parents' finished goods of some £674 million in 1955–7; by 1962–4 this had grown to £1,112 million. Local production accounted for some 90 per cent of the local market in 1955–7 and rose to 95 per cent in 1962–4, the figures reflecting the enormous importance of local production relative to exports in the overseas markets of U.K. groups. A comparison of local production here with the annual average for all manufacturing subsidiaries (Table VI.2) suggests that Table XXII.1 accounts for about 57 per cent of the sample total.

U.K. exports of finished goods for re-sale by the subsidiaries in the 227 cases fell from some £69 million at the commencement of the period to £56 million at the end. The reduction was not wholly off-set by the increase in exports of semi-manufactures (not shown in the table) from about £12 million to about £17½ million, with the result that exports of both types combined fell from £80½ million to £73½ million, i.e. from about 12 per cent of local market in 1955–7 to about 6½ per cent in 1962–4. The understatement of semi-manufactures in Table V probably leads to an overstatement of the true fall in this proportion.

The movements in the aggregate figures given in Table XXII.1 are quite consistent with the conclusions of our exercise using the alternative position – namely, that local production tends to reduce finished exports by a fraction of itself in the average case. They are, however, consistent with any number of other hypotheses. Thus it might be argued by those who are inclined to view the effects of overseas investment with particular favour that U.K. exports would have declined anyway in the cases shown owing, say, to an intensification of competition from foreign sources of supply or to discriminatory restrictions imposed by the local government. The fact that U.K. exports declined in aggregate while production (and local market) increased clearly proves nothing, and one has to look at cases in more detail if anything further is to be learned.

Even at the start of the period (1955–7), U.K. exports of finished goods were already a small proportion of the local market (less than 10 per cent) in about one-half of the 227 cases.[1] The numbers tail off in the 'higher' class intervals until '100%' is reached, where over one-sixth of cases are found. The latter are cases where local production was commenced during the period, and for that reason are of particular interest to us. They accounted for about one-quarter of U.K. exports of finished goods at the start of the period.

Of the 41, 36 showed a 'major' fall in the share of finished exports (from 100 per cent to less than 60 per cent of the local market), the median fall being to about 17 per cent. The outcome was broadly similar in the other 21 cases in which finished exports started off by supplying over 60 per cent of the local market: all but one of these showed some decline in the export share, and in most cases the decline was large. Moreover, the value of exports in these 62 cases fell markedly (from £45 million to £30 million), while the local market more than doubled.

Is it possible as a general statement to say that in the cases where U.K. finished exports started off by meeting more than a small proportion of the local market, their share had almost always fallen by the end of the period, and in most cases markedly? The answer is – broadly, yes, with the qualification that the share of finished exports rose in a few of those cases. More precisely, of the 114 cases in which finished exports started off by supplying at least 10 per cent of the local market, 101 (89 per cent) showed some reduction in export share and 13 showed a rise (mostly modest). In nearly three-quarters of those showing a reduction, the difference in percentage shares exceeded 20 points.

In summary so far, therefore, we can say that in the great majority of cases where local production was not already supplying virtually all the local market at the start of the period, and in which there was therefore some scope for reduction in the share of finished exports, that share did fall, and it usually fell by a wide margin; exports in these cases considered together also fell in absolute terms, although the local market was growing rapidly.

What of cases where local production started by meeting the whole or the great bulk (say over 90 per cent) of the local market? There were 100 of these, not counting the 13 cases in which the local market was zero or negligible at the start of the period. Of these 100, 81 were cases in which the export share either fell, or remained less than 5 per cent of the local market. What of the remaining 19 cases in which exports rose from being less to being more than 5 per cent of local market? They are with one or two exceptions cases where the local market was extremely small, either at the beginning or end of the period, or throughout. In other words, even in cases where exports of finished goods initially supplied none or a small part of the local market, there are very few genuine cases indeed in which exports increase their share of the market to a perceptible extent.

## Interpretation of the Results

There consequently seems to be a very clear general indication when examining behaviour in individual cases that local production tends to 'replace' U.K. exports of finished goods – in the purely statistical sense that the share of local production almost always increases appreciably in cases where it has scope to increase. In only a small number of cases does the share of finished exports increase and these are of little quantitative importance. We must emphasise, however, that these results still do not necessarily imply an inverse causal relationship between local production and finished exports – although they are perfectly consistent with one. The difficulty is that we simply do not know from Table V what would have happened to the local market if local production had not expanded. It would be quite wrong to assume as a general rule that the growth of local market would have been unaffected, thereby implying an enormous adverse effect of local production on finished exports: it would be equally groundless to assume in general that the local market would have remained at its initial level or fallen, thereby implying that local production has no adverse effect on finished exports. We are as far from assessing the exact nature of the relationship as ever.

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[1] Note that the category showing '0 to 4.9%' as a starting point for U.K. finished exports includes thirteen in which the local market was initially zero, i.e. neither local production nor U.K. exports had yet appeared in these cases.

Table XXII.2. Rate of growth of local production and initial share of U.K. finished exports in local market[a]

(number of cases)[b]

| Rate of growth of local production[c] | Share of U.K. exports in local market 1955–7 (%) | | | | | |
|---|---|---|---|---|---|---|
| % | 0 to 4.9 | 5 to 19.9 | 20 to 59.9 | 60 to 99.9 | 100 | Total |
| Fall of 50 or more | 8 | 4 | 4 | – | – | 16 |
| –49.9 to –20 | 5 | – | – | – | – | 5 |
| –19.9 to –0.1 | 1 | 2 | 1 | – | – | 4 |
| 0 – 19.9 | 16 | 4 | 1 | – | – | 21 |
| 20 – 39.9 | 21 | 9 | 7 | 3 | – | 39 |
| 40 – 59.9 | 21 | 8 | 5 | 5 | – | 39 |
| 60 – 79.9 | 9 | 4 | 7 | 7 | – | 27 |
| 80 – 99.9 | 3 | 4 | 8 | 6 | – | 21 |
| 100 | 13 | – | – | – | 41 | 54 |
| Total | 97 | 35 | 33 | 21 | 41 | 227 |
| Median rate of growth of production (%) | *+37* | *+37* | *+56* | *+72* | *+100* | *+43* |

*Notes:* a, b, see Table XXII.1.

c Change in local production, 1962–4 less 1955–7, as per cent of local production 1962–4.

If it could be shown, however, that there is a fairly close (inverse) association between U.K. exports and local production, using the fairly large number of cases at our disposal, this would lend some support to our ‘alternative position’ argument. It was clearly necessary to investigate this relationship in detail, and we attempted to do so in a number of ways. Before dealing with these, attention is drawn to Table XXII.2, which presents the main information on changes in local production. The 227 cases are again classified (reading across the table) by the share of U.K. finished exports in local market at the start of the period, but the vertical classification this time refers to the rate of growth of local production, defined as the change between 1955–7 and 1962–4 divided by the level in 1962–4, and expressed as a percentage. Thus there are 54 cases in which the rate of growth was 100 per cent according to this measure, comprising 13 cases where the local market was initially zero and 41 cases where exports initially supplied the entire local market.

By combining the figures of this table with those of the earlier one we can illustrate an important characteristic of the information in Table V. The relevant summary measures are set out in Table XXII.3.

Table XXII.3. Changes in the share of local market met by U.K. exports of finished goods and rate of growth of local production

| Item | Share of finished exports in local market, 1955–7 % | | | | |
|---|---|---|---|---|---|
| | 5 - 19.9 | 20 - 59.9 | 60 - 99.9 | 100 | Total |
| Median 'share' | | | | | |
| (a) 1955–7 | 11 | 41 | 76 | 100 | 58 |
| (b) 1962–4 | 5 | 23 | 38 | 17 | 14 |
| Change in 'shares' (i.e. (b) – (a)) | –6 | –18 | –38 | –83 | –44 |
| Median rate of increase of local production | 37 | 56 | 72 | 100 | 70 |
| Number of cases | 35 | 33 | 21 | 41 | 130 |

Definitions as for Tables XXII.1 and 2

This table relates to the 130 cases in which U.K. finished exports initially supplied 5 per cent or more of the local market. These are grouped into four main classes in ascending order of initial U.K. share. In each class, the median share of finished exports was computed for the start and finish of the period, and the change in shares is arrived at by subtraction as shown. If this change is compared with the rate of increase of local production, class by class, it is easily seen that there is a clear negative association between the rate of growth of local production and the change in export share; and between the latter and the initial share of exports in the market. One explanation is not far to seek: it is that, in the nature of the information, local production is likely to grow faster where its own share is initially low, for it is starting from a low base; while the share of exports is likely to decline most appreciably in those very cases, for it has most scope for decline. Obviously much of the association between the reduction in export share and the growth of local production in the table is determined by the nature of the information used, and care had to be taken in the correlation of local production and exports to exclude this influence if possible.

The principal device used in the correlation analysis was the simple one of choosing likely industries and countries, and plotting the relevant cases on a series of scatter diagrams, on which one variable was finished exports in some form, and the other, local production. Several versions of the approach were tried, including attempts to correlate proportionate changes in the variables as well as absolute changes,[1] and various refinements to the data were introduced experimentally.

Although in some versions the resulting scatter of points clearly indicated a negative relationship of some sort, there was no tendency for the points to lie on a straight line or curve, and any attempt to fit regression lines and calculate correlation coefficients would have been superfluous.

Undoubtedly one reason why this and other approaches to the analysis of Table V data were unrevealing was because, in comparing absolute changes, they failed to allow fully for the influences of 'built-in' changes in the variables, due to the normal growth of markets and associated factors. Local production is typically very much larger than exports in situations where it is fairly well established at the beginning of the period, and the normal tendency of production to grow at some steady rate frequently swamped accompanying changes in exports by an enormous margin, particularly where exports were small to start with.

Undoubtedly, the analysis also failed because the true relation between local production and exports is a rather weak one compared with other more powerful (and possibly erratic) influences affecting U.K. export performance. We were reluctantly obliged to conclude that these 'other' forces affecting exports were too powerful for this type of investigation, and that any further attempt along the above lines to uncover the true relationship between U.K. finished exports and local production would not be likely to be fruitful.

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[1] One hypothesis was simply:

$$\Delta x = a\Delta p + e$$

where $x$ is U.K. finished exports, $p$ is local production, $a$ is the 'effect' of local production on finished exports (assumed negative) and $e$ is the residual. Alternatives were:

$$\frac{\Delta x}{x} = k + b\frac{\Delta p}{p} + e$$

or

$$\frac{\Delta x}{p} = l + b\frac{\Delta p}{p} + e$$

where, in addition to the terms described already, $k$ and $l$ are constants representing 'built-in' changes in exports and $b$ describes the 'elasticity' of U.K. finished exports in response to a change in local production, its value again being assumed negative.

### Conclusions

There is little to be gained from narrating further attempts made along these and other lines to establish a precise relationship between local production and finished exports. The most we can say with absolute confidence about the investigation of the material in Table V is that, after being subjected to intensive analysis, the data remained entirely consistent with our findings elsewhere in the report. More tentatively, we are inclined to think that the extremely loose negative association between the two when plotted as variables for a large number of cases does lend some support to our conclusion reached via our direct approach – that local production tends to have a negative effect on U.K. finished exports, other things being equal. Nevertheless, while this may be true as far as the *direction* of effect is concerned, we have to conclude that by rigorous standards the present analysis did not yield any definite confirmation of the size of those effects.

## B. Inter-country Comparisons of Changes in Exports

We turn now to the second alternative approach, using official statistics for aggregate exports of manufactures from the U.K. to each of a list of countries. Put briefly, the basic idea was to see whether there is any general tendency for U.K. exports to 'do well' (or badly) in countries in which British direct investment was 'high', and if so to measure the connection between the height of the investment and the performance of British exports. The problem was to convert this general idea into a mathematically formulated hypothesis, and then to apply the necessary statistics.

### Nature of the Statistical Approach

The method adopted was in fact a simple one. We have statistics of direct investment for the period from 1959 onwards, so we used the total investment in the six years 1959–64 as the basis of our test. If the expansion of overseas subsidiaries has a continuing effect on U.K. exports (whether favourable or unfavourable) then countries in which there was a large investment in the six years 1959–64 should show the effects of this in their purchases from Britain in 1964 and subsequent years; we in fact used the average of 1964 and 1965, so as to reduce the risk of disturbance by a single freak year.

For 1964–5 we took as the 'standard' for U.K. exports of manufactures to each country the amount exported in 1958/59 (averaged), increased in the same proportion as that country's total imports of manufactures had risen – i.e. in effect the 'standard' was for the U.K. to supply the same percentage of the country's imports of manufactures as in 1958–9, before any of the investment had become effective. The excess of the actual exports in 1964/5 over this standard is then a guide to the U.K.'s export performance to that country: for comparative purposes it is best expressed as a percentage of the standard.

Table XXII.4 sets out the above figures, for every country for which our source-books gave all the statistics needed for this investigation; the countries are arranged in descending order of export performance. It also gives the value of

Table XXII.4. U.K. direct investment and export performance in twenty-four overseas countries

| Country of destination (1) | U.K. direct investment in manufacturing 1959–64 (2) | 'Standard' for U.K. exports of manufactures[a] 1964-5 (3) | U.K. exports of manufactures, 1964/5 average (4) | Excess over export target (5) | Export performance (5) ÷ (3) (6) | Investment export ratio (2) ÷ (3) (7) |
|---|---|---|---|---|---|---|
| | £ million | | | | % | % |
| Kenya | 3.3 | 15.6 | 29.4 | + 13.8 | +88.5 | 21.2 |
| United States of America | 115.0 | 453.6 | 331.5 | +122.1 | +26.9 | 25.4 |
| Iraq | −0.3 | 15.8 | 18.4 | + 2.6 | +16.5 | 1.9 |
| Belgium/Luxembourg | 7.5 | 103.3 | 118.5 | + 15.2 | +14.7 | 7.3 |
| Sweden | 6.0 | 156.4 | 159.6 | + 3.2 | + 2.1 | 3.8 |
| Brazil | 24.9 | 11.4 | 11.0 | − 0.4 | − 3.5 | 218.4 |
| South Africa | 83.9 | 249.0 | 227.3 | − 21.7 | − 9.0 | 33.7 |
| Hong Kong | 1.0 | 59.2 | 53.5 | − 5.7 | − 9.6 | 1.7 |
| Eire | 14.2 | 147.4 | 124.4 | − 23.0 | −15.6 | 9.6 |
| Netherlands | 8.5 | 174.2 | 146.8 | − 27.4 | −15.7 | 4.9 |
| West Germany | 50.1 | 251.8 | 182.9 | − 68.9 | −27.4 | 19.9 |
| Trinidad and Tobago | 2.9 | 30.1 | 21.7 | − 8.4 | −27.9 | 9.6 |
| Switzerland | 16.9 | 116.3 | 71.6 | − 44.7 | −30.3 | 14.5 |
| New Zealand | 21.9 | 170.3 | 113.1 | − 57.2 | −33.6 | 12.9 |
| Nigeria | 4.6 | 96.3 | 62.9 | − 33.4 | −34.6 | 4.8 |
| Italy | 1.9 | 159.0 | 100.8 | − 58.2 | −36.6 | 1.2 |
| France | 26.6 | 236.4 | 148.0 | − 88.4 | −37.4 | 11.3 |
| Argentina | 14.1 | 39.0 | 24.3 | − 14.7 | −37.7 | 36.2 |
| Australia | 149.1 | 414.1 | 251.0 | −163.1 | −39.4 | 36.0 |
| Ghana | 1.9 | 58.9 | 33.1 | − 25.8 | −43.8 | 3.2 |
| Canada | 44.9 | 306.4 | 163.9 | −142.5 | −46.5 | 14.7 |
| Pakistan | 8.2 | 96.3 | 44.8 | − 51.5 | −53.5 | 8.5 |
| India | 50.7 | 241.6 | 111.7 | −129.9 | −53.8 | 21.0 |
| Rhodesia and Nyasaland | 12.3 | 102.4 | 39.1 | − 63.3 | −61.8 | 12.0 |

[a] I.e. what U.K. exports of manufactures to the country would have been if the U.K. percentage share had been the same as in 1958/59.

*Sources used:* U.K. direct investment – *Board of Trade*

U.K. exports – *Annual Statement of Trade of United Kingdom*

Imports of overseas countries – United Nations, *Yearbook of International Trade Statistics*

U.K. direct investment for each country; as they stand however these figures do not provide a good guide to the 'height' of the U.K. investment, because they make no allowance for the economic size of the country – e.g. the figure for New Zealand (£22 million) is lower than that for Canada (£45 million), but any sensible test would say that the former represented a bigger factor in the New Zealand economy (and so would have a bigger proportionate effect on U.K. exports). We must clearly divide the investment figure for each country by something to represent its economic size, and on technical grounds the best choice is the figure for standard exports, as this was used as the divisor in arriving at the figure for export performance. The result is the 'investment–export ratio' given in the final column of the table: it has a fairly natural commonsense meaning as an indicator of how much investing the U.K. did, in comparison with its exports.[1]

## The Results

Since the table was arranged in descending order of export performance, one can see broadly whether this is correlated with the investment–export ratio by looking at the final column: a positive correlation would imply a descending series here, a negative correlation an ascending one. In fact the order is of a more or less random kind, suggesting little or no correlation: the rank correlation coefficient is absolutely negligible, at – .003, and it is not worth while to calculate a regression coefficient.

Those who prefer a diagrammatic presentation can see the picture in Figure XXII.1. This shows a very substantial range of variation, both for the investment–export ratio and for the export performance indicator, but there is no tendency for the results to lie on a straight line or any mathematical curve.

One further point is worth noting on these figures. In most countries, the export-performance indicator is negative, the average value being about –20 per cent.

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[1] What we are really testing is whether there is a general tendency for U.K. exports to benefit by a certain amount for every £1 which was invested in that country in the past six years. In mathematical terms the hypothesis is

$$E - S = aD + e$$

where $E$ = actual exports of manufactures from U.K. to a certain country in 1964/5

$S$ = standard exports

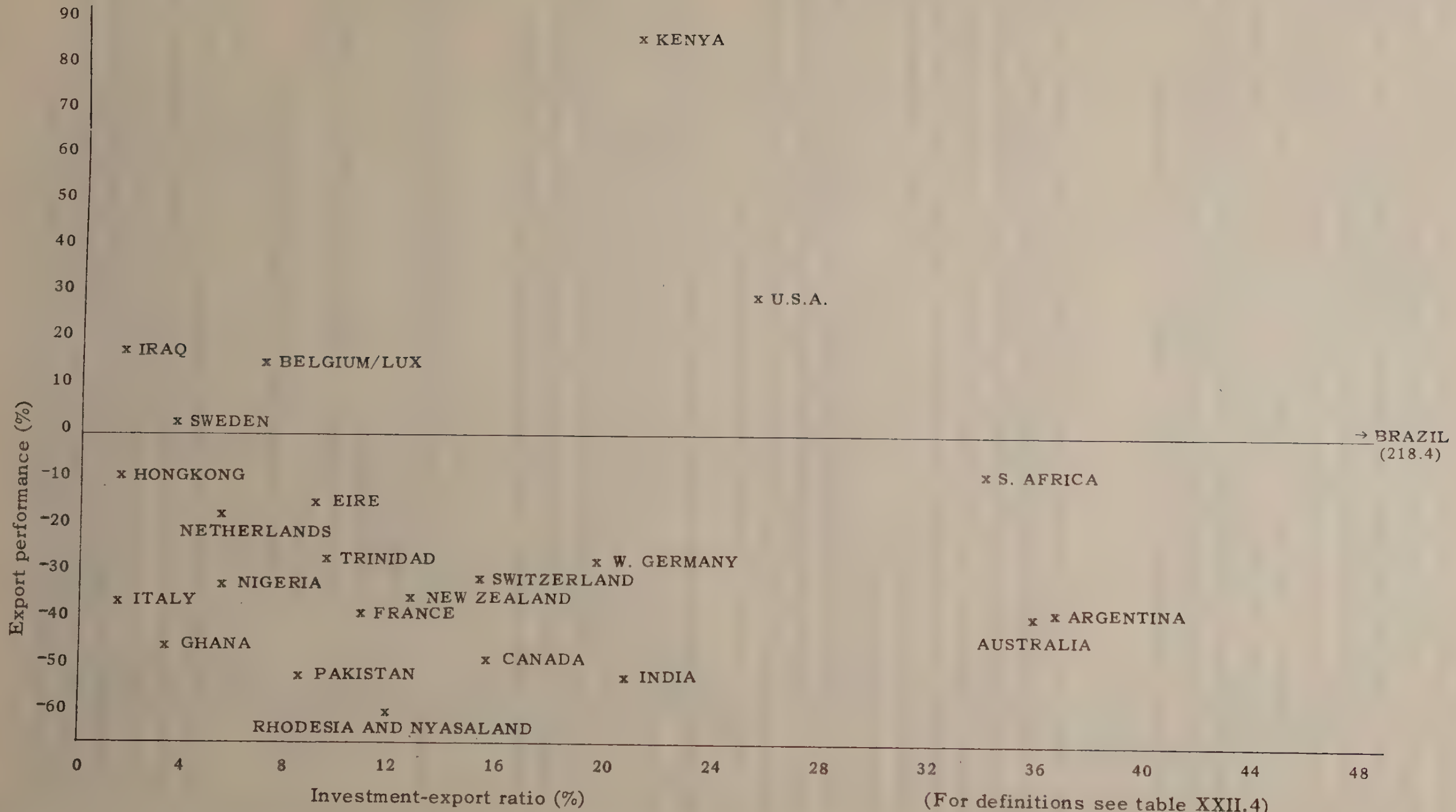
$D$ = direct investment in manufacturing from U.K. in 1959/64 in that country

$a$ = assumed average effect of £1 invested by U.K.

$e$ = residual

For regression purposes we divide through by $S$, to eliminate 'size of country' effects. The left-hand side is then our export performance indicator, and the right-hand side is the investment–export ratio, multiplied by $a$, plus a residual. The residual is more likely to be statistically well behaved when divided by $S$; it may not average zero, if there is some common factor (e.g. loss of competitive power) tending to reduce $E$ by a certain percentage below $S$.

Figure XXII.1. U.K. direct investment and export performance in 24 overseas countries



(For definitions see table XXII.4)

This has no implication as a guide to the effects of overseas investment, but it implies that the deterioration of U.K. competitive power (taken in the widest sense) between 1958/9 and 1964/5 tended to lower our exports by this amount below the standard. For considering the effects of investment it might be more natural to take as the basis of comparison 80 per cent (rather than 100%) of what we have shown in column (3), so as to reflect this factor as well as the total purchases of manufactures by the country in question: this would of course show the same absence of correlation, which is the real subject of our investigation.

Finally, it is interesting to note that the absence of correlation is broadly in line with the picture for the United States, given in Table XXII.5, in which the rank correlation comes to a small negative figure (–0.17). In the case of the United States the range of the export performance indicators is even wider: it is rather dangerous to take the average of these as a guide to change in competitive power, because nearly all the countries with large export figures show decreases, and those with small ones show increases.[1]

## Interpretation

The absence of correlation found in this exercise is a result which need cause no surprise, in view of the findings from our approaches to the individual companies: these were that the continuing effect on British exports from direct investment overseas was sometimes positive, sometimes negative, and varied a good deal from case to case, with an average of about £1 a year addition to exports per £100 invested. We cannot say that this totally independent approach *proves* the rightness of our findings, but it is thoroughly consistent with them.

It is perhaps useful to look a bit further at the quantitative side of the results. First, we may note that the investment–export ratio showed considerable variations between the countries – ranging from 1 per cent for Italy to 36 per cent for Argentina and a freakish 218 per cent for Brazil, with a mean of 20 per cent and a standard deviation of 10 per cent (even if one omits Brazil). This wide variation was fortunate from a statistical viewpoint, since it provided a good opportunity for any general influence on the export performance indicator to show itself.

The export performance indicator, however, showed an even wider range of values, from +88 per cent for Kenya down to –62 per cent for Rhodesia, with a standard deviation of 32 per cent. Without investigating the degree of correlation between the two figures for each country, we can tell from the ratio of the two standard deviations how large the effect of investment on exports would have had to be to give a perfect 'explanation' of a set of figures for the export performance indicator which have so large a variation: the ratio of 32 per cent: 10 per cent or 3.2,

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[1] The U.S. figures have been calculated from data for fifteen countries. This number was also used at first for the U.K. calculation, out of a mistaken sense of symmetry with the number used in our questionnaire; when an enlargement of the number had no significant effect on the rank correlation coefficient for the U.K. it was decided not to spend time on enlarging the U.S. list.

Table XXII.5. United States direct investment and export performance in fifteen overseas countries

| Country of destination (1) | U.S. direct investment in manufacturing 1960–4 (2) | 'Standard' for U.S. exports[a] of manufactures 1964/5 (3) | U.S. exports of manufactures 1964/5 average (4) | Excess over export target (5) | Export performance (5) ÷ (3) | Investment export ratio (2) ÷ (3) |
|---|---|---|---|---|---|---|
| | | million dollars | | | % | % |
| Nigeria | 0 | 22.5 | 62.5 | + 40.0 | +177.8 | 0 |
| Ghana | 0 | 13.4 | 24.7 | + 11.3 | + 84.3 | 0 |
| India | 54.0 | 316.5 | 512.2 | + 195.7 | + 61.8 | 17.0 |
| Australia | 414.0 | 508.8 | 653.0 | + 144.2 | + 28.3 | 81.0 |
| New Zealand | 30.0 | 93.8 | 104.1 | + 10.3 | + 11.0 | 32.0 |
| South Africa | 84.0 | 383.8 | 394.6 | + 10.8 | + 2.8 | 22.0 |
| Brazil | 230.0 | 254.9 | 254.0 | – 0.9 | – 0.4 | 90.0 |
| Argentina | 342.0 | 279.5 | 254.0 | – 24.6 | – 8.8 | 122.0 |
| Belgium/Luxembourg | 170.0 | 529.7 | 477.9 | – 51.8 | – 9.8 | 32.0 |
| West Germany | 837.0 | 1,291.8 | 1,137.0 | – 154.8 | – 12.0 | 65.0 |
| Canada | 1,636.0 | 5,615.3 | 4,501.2 | – 1,114.1 | – 19.8 | 29.0 |
| Netherlands | 158.0 | 852.1 | 681.0 | – 171.1 | – 20.1 | 19.0 |
| Italy | 263.0 | 888.1 | 621.2 | – 266.9 | – 30.1 | 30.0 |
| Sweden | 7.0 | 401.2 | 277.9 | – 123.3 | – 30.7 | 0 |
| France | 575.0 | 1,083.9 | 729.6 | – 354.3 | – 32.7 | 53.0 |

[a] I.e. what United States exports of manufactures to the country would have been if the United States percentage share had been the same as in 1959/60.

*Sources used:* U.S. direct investment – Supplement to *Survey of Current Business*

U.S. exports – U.S. Bureau of the Census, *U.S. Exports* (*F.T.* 420)

Imports of overseas countries – United Nations, *Yearbook of International Trade Statistics* implies that the continuing effect of £100 of overseas investment on U.K. exports would have had to be as much as £320 a year – not merely as an average, but always. Such a figure seems intuitively most implausible.

A 'perfect' explanation of the above kind would of course be most unexpected, whatever figure for the effect would have been required to produce it. Even, however, if one had expected no more than one-quarter of the variation in export-performance to be explained by the investment factor (i.e. a correlation coefficient of ½) the regression equation would have had to yield a computed 'effect' of £160 per £100 of investment. This is also intuitively most improbable.

In more commonsense terms, the upshot of this figuring is as follows. Even without testing the correlation or measuring a regression coefficient, one can be sure that other factors must have had a much more powerful effect in producing variations in export performance than the variations in investment. Moreover this would still be true even if investment had consistently produced a uniform effect far larger than seems at all likely from our direct enquiries. Since these direct enquiries pointed to a variable effect, it seems unlikely that the approach from aggregate export statistics used in this section would ever throw much light on its average value, even if one could use some indicators of the 'other factors' to eliminate (very roughly) the influence which these have had on the diverse movements in the U.K.'s export performance in the various countries.

The fact that our analysis of the U.S. experience tells essentially the same negative story strengthens our conviction on this methodological point; and it was also borne out by the report mentioned in the next section.

## C. The Hufbauer–Adler Report

After this chapter had been completed the U.S. Treasury Department published the report of a research project which it had financed on the effects of direct investment overseas by American manufacturers, and the authors very kindly sent us a copy.[1] This work was carried out entirely independently from our own, but it is interesting to see how many points of similarity there are – both in the questions asked and in many of the basic assumptions. We have not felt justified in delaying the publication of our Final Report in order to derive full benefit from a study of the work of these American writers, especially as a quick study revealed little that we could do in matters where we feel their treatment to be superior – we do not have the data to imitate them. Three points do however, seem to be worth making, if only briefly:-

(a) The American report includes an appendix which compared both their methods and their results with the ones which we set out in our Interim Report. In some respects the numerical results are very similar, and where there are differences (e.g. the greater profitability of U.S. investment) the fact was generally well-known.[1]

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[1] G.C. Hufbauer and F.M. Adler, *Overseas Manufacturing Investment and the Balance of Payments* (U.S. Treasury Department, 1968).

(b) The American report has a section on a subject which we have not treated: the import into the home country of manufactured goods produced by the overseas subsidiary. This is a phenomenon of which we found no significant trace in our investigations, though it must be confessed that our form was not well-conceived to detect it.[2] I believe that this is a matter in which the experiences of the two countries are, quite simply, different. The United States is a very-high-wage country, and U.S. companies have established subsidiaries in Britain and elsewhere in which American techniques can be applied and goods produced at very competitive prices, which are exported both to the U.S.A. and to third countries.

(c) The American report systematically analyses trade effects on three different sets of assumptions, and the divergences between the results of these calculations show the crucial importance of being clear about these.

The last of these points calls for a more extended treatment. The author's three basic models are as follows: the *classical*, in which a unit of direct investment makes a unit net addition to capital formation in the host country, and causes a unit net decline in capital formation in the investing country; the *anti-classical*, in which a unit of direct investment makes a unit net addition to capital formation in the host country, but causes no net decline in capital formation at home; and the *reverse classical*, in which a unit of direct investment makes no net addition to capital formation in the host country, and causes no net decline in capital formation at home. The model underlying our research, with its assumption that in the 'alternative position' a U.K.-owned enterprise in a particular country would be replaced by a similar one owned by foreigners of another nationality or locals, corresponds essentially to the 'reverse classical' assumptions, though we do assume a *small* fall in capital formation at home (equal to the initial effect on U.K. exports).

The American study takes the form of an extremely elaborate statistical exercise using published U.S. and international data. It would be impossible to perform the corresponding exercise for the U.K. for lack of a number of the necessary series, mainly in relation to transactions of overseas subsidiaries with their parents. The American authors recognise, however, that we had the great advantage of being able to obtain direct estimates from the companies of differential effects which do not appear in statistics, and of discussing the many matters involved with the companies.

For *input items* the study took as its starting point figures of exports of parts and components to manufacturing subsidiaries abroad. For the world as a whole such exports come to about $5 per $100 of assets employed. Under the classical or anti-classical hypotheses this figure represented an 'effect' of overseas investment since the assets in question were a net addition to the overseas capital stock; under the reverse classical assumptions, which conform closely to our approach, it was necessary to subtract those exports of input items that would have been made in the alternative position. The authors thus attempted, for a range of commodities, to establish the buying habits of 'normal' firms in the relevant countries, and discovered that U.S.-owned and normal enterprises displayed little difference in the extent to which they bought input items from the U.S.: in total they suggest that the differential effect of U.S. ownership amounted to rather over $½ per $100 of assets. (There is a diversity of results between countries: in Canada and Latin America, which account for over half of U.S. direct investment, the judgment was that there would be no difference to this kind of exports in the alternative position.)

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[1] The authors have subsequently acknowledged that they made an error in saying (page 90) that our treatment of capital appreciation involved double-counting.

[2] We asked how much of the subsidiary's sales of its own output was 'to members of the reporting group for use in the U.K.' The sales reported under this item (no. 21 of Form 1) were essentially raw materials of a kind which the U.K. clearly has to import.

To arrive at estimates for the effects on *finished goods*, the authors calculated a considerable number of regression equations relating, for particular product groups and geographical areas, changes in imports from the United States (and from all other countries together) to changes in the shares of the total market met by local production of U.S. subsidiaries and of local companies. The procedure adopted assumed that total demand (local production *plus* imports) in a market was autonomously determined irrespective of whether there is a local industry or not, and of who runs it. The relationships obtained enable one to answer questions such as: if U.S. investment in a market raises subsidiaries' production by $X million and lowers local production of other companies by $Y million (as compared with the 'alternative position') how will the net fall in imports of $(X – Y) million be distributed between imports from the U.S. and those from all other countries?

In the classical and anti-classical models the $X million is a net addition to local production and Y is zero. Imports into the market are therefore reduced by the whole $X million, typically with a heavy impact on those from the U.S. (U.S. exports to Canada – the extreme case – would be reduced by four-fifths of $X million.) We are, however, mainly interested in the reverse classical framework in which $X = Y$, i.e. no net addition to local production. In this case total imports are of course unchanged, but there is normally some effect on the proportions of the total that will be met by the U.S. and other countries, as a result of the differential impact on imports of subsidiary as opposed to local company production. For the world as a whole the effect of overseas investment on finished goods exports from the U.S. is calculated to be a small positive figure of about $3 per $100 of assets. Once again, there are substantial differences between geographical areas, and the calculation is exposed to great statistical errors.

Table XXII.6 sets out for comparison the effects on continuing exports of goods as found by us and by Hufbauer and Adler.

Bearing in mind the wide range of values that such figures could take (particularly those relating to finished goods), the margins of error involved, the totally

Table XXII.6. Effects on continuing exports

(Manufacturing companies: effects per £100 addition to net operating assets)

| | D.A.E. enquiry | Hufbauer and Adler | |
|---|---|---|---|
| | | 'Reverse classical' | 'Classical' or 'anti-classical' |
| Input items | +3½ | + ½ | + 5 |
| Finished goods | −2½ | +3 | −55 |
| Total | +1 | +3½ | −50 |

different methods adopted, and of course the fact that one set of figures relates to U.K. investment and the other to U.S. investment, the findings for the 'reverse classical' case have a marked similarity. Both studies point to a small positive effect taking input items and finished goods together. Moreover, the American results unmistakably underline the point that our type of assumptions gives rise to the most favourable calculation of the effect on exports: in the classical and anti-classical models the positive effect on input items is heavily outweighed by a large negative effect on finished goods. We had already illustrated this point on pages 110–11 of the Interim Report, where we examined the effects of assuming that, in the absence of production by a British subsidiary, rival producers would on average replace only 90 per cent of the British subsidiary's output, and not 100 per cent.

# Part V

# EFFECTS ON THE NATIONAL ECONOMY

## XXIII Review of the Problem

The last two parts of the Report have been essentially concerned with the effects of overseas investment on the U.K. balance of payments. In view of our terms of reference, and of the topical interest in that part of the subject, such a starting point was probably inevitable. As a general proposition, however, this is not the natural starting-point for an investigation of the effects of direct investment overseas, for there is no *general* proposition to say what kind of result is 'good' and what 'bad': the expression 'strengthening (or weakening) the balance of payments' seems to carry the implication that the former must be good, and the latter bad, but this is only true if there is a general tendency for the balance of payments of the country in question to be weak. In the case of a country like Germany, a factor which tended to strengthen the balance of payments would in most post-war years have been a source of embarrassment rather than of relief. The question whether – or at what stages – direct investment overseas tends to strengthen or weaken the balance of payments is important, but is really subsidiary to more general questions, such as its effect on the real national income. This is, I think, what some commentators basically had in mind when saying that the Interim Report left the most fundamental questions unexplored.[1]

An analogy may help to make this point clear. Suppose that it were proposed to abolish passport control and all the other man-made barriers which restrain international tourism, either as a unilateral act applying only to the U.K., or by a general international agreement. Either of these proposals might have a significant effect on the balance of payments of the U.K., and it might be considered wise to assess this before coming to a conclusion. But the main debate would be on issues more directly related to the proposal – for example, whether it is a good thing for people of different nations to see more of one another, or perhaps whether this benefit is sufficient to outweigh the inevitable weakening of control over immigration. If the proposition were acceptable on those grounds, one would tend to assume that any disturbing effects on the balance of payments could, if necessary, be dealt with by other policy measures – though recognising that it is as well to be aware of the probable effects (which might of course be welcome as off-setting a previous tendency to dis-equilibrium in the opposite direction), and perhaps recognising that in emergencies the balance of payments *might* require some restriction on tourist expenditure abroad as part of a package deal.

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[1] See for example S. Brittan in *Scotland* (June 1967).

In the case of overseas investment, our primary concern is with its effects on the U.K. national income in real terms. This is, of course, a deceptively simple phrase, because it should include indirect effects on the national income: thus one might conclude that the national income had been held down in a certain period by the adoption of a policy of deflation to protect the gold reserve, which would have been unnecessary if overseas investment had been restrained (or, of course, if various other policies had been adopted – see the Interim Report, page 131 for a brief discussion of policy conclusions when alternative remedies are available). But it is the effects on the national income which are of fundamental interest, rather than the effects on the balance of payments as such – which may have little or no impact on the national income, even indirectly.

Besides the effect on the national income, we are also interested in the effects of overseas investment on other objectives of national policy, which cannot be subsumed in the national income figures. One could perhaps concoct a long list of such objectives which *might* be influenced by overseas investment, ranging from the provision of more varied employment opportunities to British citizens who like working abroad (so that each individual would have a better chance of finding a job that suited his tastes) to the stimulation of a wider interest in foreign affairs or international politics. Some of these might be held to be important, but the only one which I would like to stress is the effect of overseas investment on the welfare of people in other countries: this applies more particularly to the welfare of people in less developed parts of the world, whose advancement the government is attempting to foster by various forms of government loans and grants, including technical assistance. The contribution which well managed overseas investment makes to this objective is clearly to be counted as a credit item in any assessment.

## A. Income from Capital

The most obvious way in which overseas investment might affect the real national income is tied up with the question whether capital invested in this way yields a bigger contribution to the national income than it would if it were not so invested.

This is not as straighforward a question as it looks: we have seen that, in a very important sense, the alternative to direct investment overseas is largely the accumulation of financial assets overseas or the avoidance of international debt, rather than more investment in the U.K. (see in particular Appendix C, for the general reasoning, and page 92 for its numerical application); and we have also seen that in so far as more direct investment overseas means less investment in the U.K., it is likely to be *non-industrial* investment which is affected, rather than investment by the type of company which invests overseas (see pages 93–5). Nevertheless, whatever the alternative may be, the starting-point for the calculation must be the profitability of the assets employed by overseas subsidiaries etc., on which we have already given the various figures.

This is, however, only the starting-point. If we are concerned with the effects on the national income of the U.K. – which is our primary criterion – we must clearly ignore any part of the profits which is paid in taxation to overseas governments: we can take some credit for this towards our secondary objective of helping other countries, but even where the host country is amongst the least developed of them the general view is unlikely to be that £1 going to a foreign government is as good as £1 remitted home. If the host country is richer than the U.K., the contribution to its revenue from a British subsidiary might almost be ignored.

We must start, then, with overseas profit *net* of overseas tax, but at this point a somewhat confused debate is liable to start as to whether this should be compared with U.K. profits *before* or *after* U.K. tax, or possibly with some third concept. To a considerable extent, however, this argument seems to be based on a false view of the alternatives. In so far as the alternative to owning direct investments overseas is the ownership of financial investments overseas, the comparison should be with the income from these – again after deduction of overseas tax; if the alternative is the absence of overseas debts which would otherwise exist, then the comparison should be with the interest payable on these, net of any U.K. tax which may be collected on it. In neither of these cases does the question as commonly posed really arise.

## Capital at Home and Overseas

The problem is only a real one to the limited extent that the alternative is the possession of more real capital assets in the U.K., i.e. for about 11 per cent of the net operating assets overseas. In so far as this is the case the proper comparison must start with the U.K. profits *before* deduction of tax (whether Corporation tax, paid by the company, or taxes levied on the shareholders): the fact that part of these profits is to be paid over to the U.K. Government does not make that sum any the less a part of the British national income. On the other hand it *is* correct to deduct any government expenditure which is caused by the presence of this extra capital in the country, and which it is proper to regard as payable out of that taxation: for this is a sort of 'cost' which should be subtracted before arriving at the true income derived from the use of the capital.

This again is a tricky concept, and it is not really necessary to explore it very fully here because we have concluded that most of the small amount of extra capital in the U.K. would be non-industrial. But as the subject is one which has aroused some considerable interest, a few remarks about important points – both positive and negative – may be useful.

On the negative side one can make the following rather dogmatic assertions:-

(a) The theory of taxation provides no sort of presumption that these deductions will be even approximately equal to the amount of (say) corporation tax payable: no valid case can be made for deducting that tax as a first approximation to the required expenditure figure.

(b) We must remember that the extra costs which we are seeking to assess should reflect only the presence of additional *capital*: full employment was in fact secured without that capital, so that we are concerned only with the extra output attributable to using (on average) more capital per head.

(c) We must not count expenditure which is to be regarded as paid for out of local rates or indirect taxation of any kind, both of which are subtracted from the proceeds of an enterprise's activity before profits are computed.

Without attempting any precise listing, the last two points together rule out most of the types of expenditure which might at first sight seem important. Thus we cannot – broadly speaking – count any expenditure on roads, because the additional output which is carried along them will call for an increased number of vehicles and increased fuel consumption, which will add substantially to the revenue from indirect taxation: I will not enter into the debate as to whether this will do more or less than cover the extra expenditure necessary, but anybody who argues in favour of making a deduction is automatically making a case for additional taxation of some kind on the use of lorries. We must also remember that part of the extra local rates payable in respect of the capital goes towards local road services (including lighting, etc.).

Similarly we cannot count any expenditure on education, unless the additional capital calls for special skills which are provided through government facilities: the number of people to be educated and the number needing job preparation are both unaffected. The same applies to health expenditure, unless the additional capital raises the risks of illness, and also to local authority housing, national insurance and social security benefits generally.

Finally, one can count little or nothing for the extra sewerage, water supply and other 'local' facilities, which may be required on account of the presence of additional real capital and the increased flow of output. Essentially these would be met by the increased sums collected in local rates: one might even guess that the position of the local authorities will on balance be strengthened – few, I imagine, would deny this, except where congestion is acute – so that rate poundages might be reduced or less reliance placed on government grants.

What, then, is left to be said on the positive side? Without doing an elaborate research into the matter, I find very little of importance which was applicable in our period – i.e. before the system of investment grants was started. It is true, of course, that the old system of investment allowances reduced the amount of taxation which the companies using the extra capital in the U.K. would actually have paid, and to that extent the issue about whether tax should be deducted or not was rendered *less important*; but the plain fact is that as there is no case for deducting the amount paid in taxes, we do not need to worry about what it is that is not to be deducted. What the system *did* mean is that people who liked to arrive at the (gross) figure by taking post-tax profits and adding back the tax have to add back the tax *actually paid*, and not a fraction based on the standard rate of income-tax plus profits tax.

I do not wish to deny that there probably are some small deductions which should be made from the pre-tax profit figure, even in our period:[1] the principle of making a deduction to reflect expenses which should properly be regarded as an offset to direct taxation is a legitimate one, which needs to be fairly stated against the advocates of using gross U.K. profits. I rather suspect however that the amounts collected in indirect taxation (e.g. local rates) more than off-set the additional costs attributable to the presence of extra capital, so that there is probably as good an argument for saying that the true income to the nation from using the capital has been *under*stated by taking the pre-tax profit figure as used for national income purposes, because too much was deducted on account of those costs. The use of pre-tax profits in the U.K. for comparison with the overseas profits net of overseas taxes seems, therefore, to give a close approximation to the proper comparison, even in cases where the additional capital in the U.K. is of an industrial character.[2]

The above discussion has implicitly assumed that the capital in question would be of an industrial character, because that is the more interesting case. If it would be non-industrial the problem is very varied. I would myself regard some office-building in the centre of congested towns as involving the community in heavy net costs for dealing with the added congestion; but if the greater flow of financial capital avoided difficulties over mortgage finance and led to more house-building, then the extra costs falling on general taxation might be negligible – but we must remember that the income from using the houses would be small.

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[1] I deliberately do not attempt to discuss how far the picture would be changed under our present system of investment grants: this seems to turn largely on how far (if at all) these grants get into the pre-tax profit figures used for the national income, and on any possible effect on the depreciation figures. Very possibly the answer is that the new system will still call for no deduction, but there are problems of theory and practice which I have not attempted to study.

Any conclusion about the deductions (if any) on account of investment grants would clearly have to be based on the standard definition of profits used for national income purposes, and would not necessarily apply to 'profits' as produced in commercial accounts by any one of the numerous methods now being employed.

[2] There will, of course, be individual cases where this general argument would not apply: but there may be as many in which local rates (which *are* subtracted in arriving at profits) seriously exceeded the costs attributable to the presence of the extra capital as there are cases in which a significant cost ought to be set against the direct taxation on profits.

It is, of course, well known that governments all over the world – whether national, provincial, or local – have a marked tendency to want to attract capital to their areas, if necessary by offering tax concessions, and industrialists are seldom heard to say that the costs which their activities cause to governments exceed the amounts which they pay in taxation. For what it is worth – which is not much – these actions of the parties concerned support the argument in the text.

## B. Other Direct Effects

The above section has been considering the income earned by the capital itself when it is used for overseas direct investment, as compared with various alternatives. In addition, we have to consider the effects of this investment on the real income which accrues to other factors in the various possible situations – including the income accruing to other units of capital: in the first instance we are concerned with the effects on the incomes of British-owned factors, but as before we have a secondary interest in the gains (or losses) to other countries, especially the less developed ones.

### Nature of the Comparison

It is of course theoretically possible to chase the effects of any action on a country's general productivity through endless possible repercussions, and many varieties of assumption about government policy could in principle be considered. Fortunately, however, it is legitimate to limit the scope of our investigation, on the strength of three factors which we have already noted:-

(a) In the main the counterpart of more direct investment overseas is a reduction in our holdings of international financial assets (or an increase in international indebtedness), rather than less physical investment in the U.K.

(b) Even if this were not so, we are concerned with the effects of a moderate change in the size of British investment, not a doubling of it or its total cessation, and this is not a big enough item to require a chasing of elaborate repercussions, or any elaborate assumptions about major government policies (see the Interim Report, pages 27–30, especially the footnote on page 28).

(c) At the level of the individual company, this 'less or more' approach can be thought of as implying a study of the consequences to the group of not having established one of its overseas subsidiaries (or even failing to expand one), rather than a comparison between (say) Imperial Chemical Industries as it is, and as it might have been if it had never established any overseas subsidiaries at all. We do not have to think in terms of a complete metamorphosis, but rather of a (significant) marginal change.

### Economies of Scale

Overseas investment may affect the scale of production in U.K. factories in a variety of ways, and so affect the real income generated per unit of productive resources (capital, labour or land) engaged there. For example, a decision to build a nylon plant in Australia is likely to mean bigger exports of nylon salt from the U.K. than there would have been in the alternative position ( in which an American company would have built the plant, and used nylon salt from the U.S.A.): this means either that the U.K. nylon salt plant can be bigger, or that it is operated nearer to capacity – both of them forces making for a higher level of productivity and so of real income per unit of resources employed.

On the other hand a decision to establish a plant in South Africa to make household disinfectants under a famous British trademark would be likely to lead to less exports of those disinfectants from the U.K. than in the alternative position, in which broadly similar disinfectants were made in South Africa by a firm of some other nationality – with a corresponding adverse effect on the scale of U.K. production.[1]

In particular cases these considerations may well be important, but in the aggregate it seems clear that they would be very small. We have seen in Chapter XV that the *net* continuing effect on U.K. exports of overseas investment done by our sample of companies was extremely small. Even if we consider the unrealistic assumption of a complete disappearance of all overseas subsidiaries in our sample, new or old, the effect is a fall of only £13 million a year: the more sophisticated comparison – between what actually happened and the position which might have existed if production by U.K. subsidiaries overseas had been about 10 per cent less than it was – shows that exports from the U.K. would then have been changed by £1 million a year, whilst home sales by the U.K. companies were some £2,300 million a year. The net over-all effect of overseas investment on the scale of production seems therefore to be negligible.[2]

Strictly speaking this is not the end of the matter: greater production by the makers of nylon salt may have more effect on productivity than smaller production of household disinfectants, even if the size of the change were the same. Indeed, one might expect the decisions about overseas investment to be favourably biassed in this way, since the companies are influenced by these effects – though they are influenced by many other things as well. But even if we ignored the negative effects of overseas investment on U.K. exports altogether, the effect of a 10 per cent change in production by overseas subsidiaries would be an addition of under 1 per cent to U.K. output.

We did not, therefore, feel that attempts to assess the effects of overseas investment on U.K. productivity *via* its effects on the scale of production in the U.K. would be worth-while, especially as Table XV.2 gave the clue to a much more promising topic: the influence of the greater *total size* of the U.K. group, including its overseas activities.

## Research and Know-how

In many industries a considerable part of a company's activities is devoted to the production of *knowledge*, rather than to the direct production of goods: knowledge of new techniques, new products, new methods of marketing and so on. One of the

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[1] It does not of course follow that a decision of this kind would be commercially unsound: the gains from the South African plant might well exceed very greatly any loss to the company on its U.K. operations.

[2] As with all our figures (except where the contrary is stated) the effect on exports is based on the assumption that any production not undertaken by a British subsidiary would have been 'replaced' by production by some other company. The discussion on pages 110–11 of the Interim Report showed that the favourable effect on exports would disappear if one assumed '90 per cent replacement' instead of 100 per cent.

‘economies of scale’ is that when this knowledge has been secured much greater use is made of it, if it can be applied to a much bigger output: and in large measure this remains true if half the output is overseas, rather than all in the U.K. – though some of the knowledge may not be applicable to oversea conditions, and the costs of transmitting it may be greater.

Formally, this point applies to all kinds of knowledge, stretching from the results of deliberate research at the one extreme – which is specifically undertaken in the hope of acquiring useful knowledge, rather than as part of the productive process – to the sort of know-how which is acquired as a result of carrying on the day-to-day activities of the company. As a general proposition, this know-how is perhaps less likely to be useful to other plants operating in other countries, and may be more difficult to transmit effectively: but on occasions it can be of exceptional value, because an oversea plant operating in a different environment may pick up the benefits of practices which are in common use there, but have not been introduced in the U.K. Many companies attach exceptional value to what they learn from their American subsidiaries for this reason, because the atmosphere is one of keen competition; moreover the United States is ahead of us on the road to higher real wages, and so frequently uses practices which we *should* have adopted but have not yet got around to introducing. A process of moving staff between different countries will sometimes go some way towards passing round the fruits of this experience, but it obviously involves considerable costs.

The problems of measurement in this field are formidable, and are discussed in the next chapter. They involve the consideration of other possibilities besides overseas investment as a means whereby a company can get part of its research costs met from overseas (e.g. the granting of licences to other companies) or can secure the benefit of overseas experience (e.g. the purchase of know-how from foreign firms). But it is clearly true that knowledge can flow more freely and effectively where there is common ownership, and there is an obvious economy if the same bit of research can be made to serve two (or twenty) different plants.

In some degrees the ‘sale’ of knowledge to one’s overseas subsidiary is a substitute, so far as ‘scale’ is concerned, for having a larger factory in the U.K. and exporting the manufactured product. Oversea tariffs are frequently the reason for setting up the subsidiary, but knowledge as such is not affected by these. Exchange control and oversea taxation on royalties may however do something to reduce the national advantage of this device.

## C. Indirect Effects

The above two sections have been concerned with the direct effects produced by the overseas investment on the income from capital or the general productivity of factors of production which are directly affected by it.

This chapter should perhaps end by reverting to the point made at the top of page 302 – namely that overseas investment *may* have important indirect effects on the level of the national income, by influencing the state of the balance of payments and so possibly leading the government to adopt a different macro-economic policy.

# XXIV Productivity Effects: Problems of Measurement

There are at least two very different things in this field which one would like to measure, and it is most important not to confuse them. The distinction is fairly obvious when the point is made, but we spent many hours trying to decide what information we needed, because we started by thinking primarily of the first concept, and then realised that we must concentrate primarily on the second. I will illustrate the point by taking a simple case, which deals only with formal research done in the U.K., and ignores the costs of transmitting information.

The first concept is *the extent of the economy* obtained by making the same research available for use in the plants of overseas subsidiaries as well as in the U.K.: or rather – since we are interested in marginal changes – the extent of the *added* economy through having an additional overseas subsidiary. We are also concerned with the question of who gets the benefit of this economy – or at least with the question of how much of it benefits the U.K. by one route or another.

The second concept is limited to part of the first one, because it is very common for companies to keep their books in such a way that part of the benefit accrues in the form of higher profits of the oversea subsidiary, and we have alreadv counted these.[1] We are therefore concerned to measure the remaining part, which accrues to the U.K. in other ways – not so much because it is interesting in itself, but in order to get the right figure for the total effect.

This point may be seen positively by again taking the simplest case, in which a company is establishing its first oversea subsidiary and does not change the amount of research which it does. It might decide to charge the subsidiary for the use of its research results, in which case the return to it will be not only the subsidiary's profits, but also this charge, less any revenue which it might have to forgo from licensing in that country now that it has a subsidiary producing there. It might, on the other hand, decide to supply the research results without charge, in which case the profits of the subsidiary would be higher: there would still be a genuine economy (or 'productivity gain') from research-sharing, but this would be embodied in the subsidiary's profits. If one has measured these profits, there is nothing further to add on account of research-sharing: indeed, there may well be something to subtract – the potential licence fees which might have been secured by licensing a local company, and/or the costs of transmitting the information.

In our main enquiry we recorded the actual profits and we shall use them in this part of the report without any adjustment for possible under-charging (or over-charging) for research results. To assess the full consequences of a possible loss of a particular subsidiary we must therefore add to those profits such payment as was actually made for research, with various adjustments for licence fees and other items on the lines discussed below: our measurement is for the second concept – what is to be counted *on top of* the actual profits, not the true benefits of research-sharing etc. (We do, however, attempt to get some idea of the true benefits in the final section of the next chapter.)

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[1] Alternatively, the gain may accrue to customers of the overseas subsidiary, and should not be counted in a U.K. calculation.

With these introductory remarks we can pass to the various forms of economy and see in more detail how we tackled the problem of measuring the amount to be added to profits on that score – always remembering that we are concerned with the effects of losing a particular subsidiary (the one in Country X, to adopt the language of our forms), whilst keeping the others intact. These results for particular subsidiaries are then related to the relevant assets and the results averaged, so that one gets an average of the effects of possible marginal changes.[1]

## A. Research Done in the U.K.

If we start with the case of research done in the U.K., we can proceed as follows:-

(a) If the subsidiary in Country X did in fact pay £x towards the cost of the research, then its disappearance would mean the loss of that revenue.

We actually asked companies (in questions 4 and 10) to report payments for *information*, including know-how, etc., which is a wider concept; but payments for that would also be lost, and therefore need to be counted, so that there is no harm in having a combined figure so far as the total effect is concerned.

(b) The loss of this subsidiary would presumably reduce somewhat the parent company's costs for disseminating the information to the subsidiaries, and this should be subtracted from the £x.

We virtually ignored this item, though we had a note asking companies to exclude payments specifically made in respect of such costs when reporting payments under (a); this decision was essentially based on considerations of what information it was practicable to collect, but also accorded with our general attempt to avoid the risk of under-estimating the gain.

(c) On occasions it might be true that some of the U.K. research was primarily intended for the benefit of the subsidiary in Country X, and this expenditure could be eliminated; we therefore asked for the amount spent in that way (question 9), which has to be subtracted.

(d) Companies were also asked (questions 5 and 10) to estimate how much (additional) revenue they might have received from outside companies for licences etc. to use the results of their research and know-how, if they had not been producing in Country X; this needs to be subtracted from the £x, since it is an alternative form of revenue which would be opened up.

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[1] Readers who are interested in the actual manner in which the questions were put to the respondent companies may like to study the form used – which is reproduced in Appendix J – and also the notes, which are very important.

These four items – one of which is assumed to be zero – provide the essential elements in our calculation, so far as concerns the sharing of the costs of U.K. research (plus the similar benefit from passing on U.K. know-how). There are, however, a great number of logical complexities which need to be resolved before one can arrive at a definite figure. Essentially we have been concerned to get a maximum estimate, and the easiest set of assumptions to make is as follows:-

(i) We assume that the amount of U.K. research would not be affected by the disappearance of the subsidiary in Country X, apart from cutting out research primarily intended for its benefit (item (c) above).

(ii) We ignore the fact that some of the losses might fall in the first instance on subsidiaries in countries other than X, and be passed on by them to their local customers, or to minority shareholders in those subsidiaries, or to the local governments in reduced tax revenue.

## A Numerical Illustration

The second of these points needs some explanation, which is also helpful for understanding the 'true gain', as opposed to what needs to be added to the recorded profits in Country X. It may best be explained by taking a simple example, and seeing how it works out under three different systems by which the parent might allocate the costs of its U.K. research; this is assumed to be £100,000, of which £2,000 is recovered by licences to outside companies.

The three systems are as follows:-

(a) *'Pro-rata'* – The remaining £98,000 is allocated between Country X, other overseas subsidiaries and U.K. factories in proportion to production in each area.

(b) *'Standard charges to subsidiaries'* (e.g. 2 per cent of sales), with the parent paying the balance.

(c) *'Father pays'* – Research results are made freely available to subsidiaries (which earn higher profits in consequence).

For convenience we assume that the total charged to subsidiaries under (a) and (b) is the same. On this assumption, the position with and without the subsidiary in Country X might look like this (£'000):-

| | | Without Country X subsidiary | |
|---|---|---|---|
| Allocation of research cost | Actual position | Assn. (a) | Assn. (b) |
| Recovered by licensing | 2 | 4 | 4 |
| Charged to Country X subsidiary | 6 | 0 | 0 |
| Charged to other subsidiaries | 46 | 48 | 46 |
| Charged to U.K. factories | 46 | 48 | 50 |
| Total cost of research | 100 | 100 | 100 |

The elements which we have indicated above would show, both for (a) and for (b), that the loss of the subsidiary in Country X would mean a loss of £4,000 through less research-sharing, to be added to the loss of the profits earned in Country X : £6,000 previously received from Country X would disappear, but an extra £2,000 would be obtained by licences to independent producers there.

If the charges to other subsidiaries are fixed – assumption (b) – all of this £4,000 falls on the U.K. factories, and there is no more to be said. Under the pro rata system, however, £2,000 falls initially on the other subsidiaries, and part of this may well 'stick' in those countries – as higher prices, or reduced yield from taxation, or reduced profits for minority shareholders. Our method of calculation ignores these possibilities, which imply that perhaps £1,000 would fall on the other countries, and £1,000 be passed on to the U.K. (as reduced profits after tax for the parent company); the assumption of complete passing-on to the U.K. would be strictly justified only if prices were not raised, the extra charge was disallowed for local taxes, and there were no minority interest in the equity – or, of course, if companies' practices had no element of 'pro rata' in them.

The third assumption – that the parent company bears the whole cost – holds quite frequently (at least as an approximation); it is included in this illustration primarily to show how our calculation can lead to a negative figure for this part of the 'effects' – which is the counterpart of the fact that profits are then higher. With such an assumption the figures would look like this :-

| Allocation of research cost | Actual position | Without Country X subsidiary |
|---|---|---|
| Recovered by licensing | 2 | 4 |
| Charged to Country X subsidiary | 0 | 0 |
| Charged to other subsidiaries | 0 | 0 |
| Charged to U.K. factories | 98 | 96 |
| Total cost of research | 100 | 100 |

In this case the computation comes to *minus* £2,000 ; there are no complications about overseas customers etc.

## B. Research Outside U.K.

This problem divides into two very different parts : research in Country X, and research by other overseas subsidiaries. So far as the latter is concerned, there is in fact little to say, because we treated it on exactly the same basis as research in the U.K.; indeed we asked companies for a single figure to represent (for example) payments by the Country X subsidiary to all other members of the group, whether in the U.K. or not.

The logic of this is simply that if the Country X subsidiary was making payments for research to (say) the American subsidiary, then its disappearance would inflict a loss on the American subsidiary, which would entail a corresponding loss to the U.K. parent through lower profits. Strictly speaking, of course, the size of this 'corresponding' loss would be reduced by the part which would fall on the U.S. treasury (and possibly on American minority shareholders and/or customers): if payments to fellow-subsidiaries were large this point would call for the collection of separate figures, but we believe them to be relatively small, and we have not attempted to rectify what was an oversight at the time the form was prepared.

## Research by the Country X Subsidiary

With research done by the subsidiary in Country X the logical problems are quite different. It is no longer a matter of finding out what payments to the rest of the group would be lost if one subsidiary disappeared, but a matter of assessing the loss of research results coming from that subsidiary, and subtracting whatever the group paid for them.

The main logical difficulty in the problem is that in practice most research done in Country X is usually of interest primarily to that subsidiary, but that some parts of its results may be valuable to other members of the group (and effectively transmitted to them); moreover in a minority of cases there is one country – or perhaps two or three – in which the subsidiary really does a good deal of research which is of considerable value to other members of the group, including the U.K. factories. To value the actual results transmitted from Country X would have been impossible: we had to stick to a cost basis – on the broad argument that it would have been possible to pay for similar research to be done – but to avoid including research which was of purely 'local' interest (as most market research was).

We assumed – rightly, as the results show – that this would not be a very big item, and that simple techniques would suffice – and that in any case more logical ones would not be feasible in practice. We therefore asked the companies to do three things:-[1]

(a) To select those oversea subsidiaries from which they thought that there was an important 'feed-back' of knowledge to the rest of the group (including informal know-how, etc., discussed below).

(b) For each subsidiary so selected, to report the total cost of formal research done by it (question 6), the estimated percentage of this which was 'essentially of relevance to Country X only' (question 7), and the amounts paid by other members of the group to Country X for information (question 8).

(c) To report the total cost of formal research done by all oversea members of the group taken together (question 2).

For each of the selected subsidiaries we assumed that formal research which was described as 'essentially of use to Country X only' was worth nothing to the rest of the group, but that from the remainder the rest of the group derived a benefit equal to its cost (even though it might not have wanted to have such research done, if the decision had been made without regard to the benefit to the Country X subsidiary). This information – together with the figure for know-how discussed below – provided the foundation for our estimate of the gain derived from investing in countries with advanced technology.

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[1] A more detailed discussion of the procedure is given in Appendix J and the forms annexed to it.

For most reporting companies the answer to question 2 revealed that there was a certain amount of formal research done in countries other than the ones selected as yielding an important feed-back of knowledge. In some cases this was a large figure, but enquiry (or a note on the form) indicated that this research was of a kind which had no value outside the country concerned. In other cases a rough estimate was made by the Department – after consultation with the company – of the amount (if any) which should be included as being of value to the rest of the group, so that we should not miss out anything significant because it was derived from a host of small items. This allowance was designed to cover gains from informal know-how, as well as from formal research.

## C. Informal Know-how

The most difficult item to assess is the value to the rest of the group of informal know-how, taken in its widest sense, which would be lost if the subsidiary in Country X disappeared. By definition there is no assessable cost of production of this knowledge, because it arises as a by-product of ordinary operations: we cannot therefore use this even as a starting-point for assessing the value. The company's assessment needs to be made country by country, since obviously the answers are quite different for (say) U.S.A. and Nigeria: the only mitigating factor is that almost all companies reckoned the value to be negligible except in a few countries.

We owe a great debt of gratitude to the companies with which we had preliminary discussions about how to phrase the question, and to all our respondent companies for the way in which they tackled the job of answering it. Those who wish to study the problem as we tackled it will find the story in Appendix J and – even more important – in the notes sent with the forms, which are annexed to that appendix: one of the great logical difficulties is that the information should not be valued more highly than the cost of obtaining something equally useful by other means – a point to which we shall return in the final chapter. Here I need only say that we reached an agreed and usable figure with every one of the companies, though in a number of cases this was only on the basis of a maximum which it could not exceed. As we wanted to avoid under-estimation this was in practice sufficient, since this maximum figure was usually low enough to have little impact on the answer.[1]

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[1] The question actually used was:
'If manufacturing subsidiaries, etc. had not been set up in Country X, what additional expenditures by other members of the group would have been needed to compensate their operations for loss of informal know-how obtained from X?'
This has to be considered, however, in the light of the notes supplied with the questionnaire. See page 398.

## D. The Main Calculation

It is now time to put the outcome of the above sections together. For each company, it was possible to arrive at a figure for the loss to the rest of the group which would have been caused by the disappearance of its subsidiary in any one of the overseas countries from which it considered that it derived an important feed-back of knowledge: this would allow for the flow of knowledge in both directions and any payments made for it, and for the possibility of granting licences to outside producers in that country if the group were not manufacturing there, and it would be the amount to be added to the profits actually recorded. We refer to these figures as the 'net gain from knowledge-sharing'.

Table XXIV.1. Calculation of gain[a] to rest of group through knowledge-sharing – all subsidiaries in U.S.A.

(1964, £ thousand)

| Item, and source of information | Value for U.S.A.[b] | (Corresponding figure for all oversea subsidiaries) |
|---|---|---|
| *Credit items* | | |
| Payments for information made by U.S.A. subsidiary to rest of group (question 10) | 820 | (6,510) |
| Cost of formal research done by U.S.A. subsidiary, excl. that of relevance to U.S.A. only (questions 6 & 7) | 1,650 | (6,830) |
| Value to rest of group of informal know-how originating in U.S.A. subsidiary (question 12) | 3,300 | (6,720) |
| *Deductions* | | |
| Cost of research done by rest of group which is primarily for the benefit of the U.S.A. subsidiary (question 9) | –290 | (–630) |
| Cost to rest of group of transferring information to and from U.S.A. | Assumed negligible | |
| Payments made by rest of group to U.S.A. for information (question 8) | 0 | (–740) |
| Additional income from licences, etc. which would be obtainable if group were not manufacturing in U.S.A. (question 11) | –700 | (–5,150) |
| Net gain | 4,780 | 13,530 |

[a] This is the figure which has to be added to the recorded profits of the U.S.A. subsidiary to arrive at the total gain which the group derives from the subsidiary: many companies keep their books in such a way that much of the 'true' gain from research-sharing, etc. is embodied in the profits of their subsidiaries – e.g. because little or nothing is charged to them for the supply of research results and know-how.

[b] The Unilever companies in the U.S.A. are subsidiaries of the Dutch Unilever N.V., and are therefore outside the scope of our enquiry.

For each company it was also possible to arrive at a combined figure covering all its overseas subsidiaries. This is not meant to represent the loss which would occur if all the subsidiaries were lost simultaneously : we have not attempted the impossible task of comparing Unilever's position as it is with a hypothetical position in which it had no subsidiaries at all. Rather, it is the sum of the losses which would arise if each of the subsidiaries in turn were lost, leaving all the rest in operation. Its usefulness is essentially for calculating an average loss per £1 million of overseas capital – a topic which we discuss in the next chapter.

The elements in this calculation can be seen from Table XXIV.1, which gives the outcome for all subsidiaries in the U.S.A.: such figures not only show the logic of the procedure, but also the orders of magnitude of the various items. The items are described in the language applicable to a single country ; the combined figures for all countries are however also given, because the contrast is interesting. These figures are fully comparable, but they are put in brackets to emphasise that the descriptions of the items – and particularly the references to the question numbers – do not apply exactly.

The full set of figures derived from the calculations are given and discussed in the next chapter ; we can, however, immediately see that the U.S.A. accounts for about one-third of the net gain for the world as a whole, with a disproportionately large figure for informal know-how supplied, and a very small one for payments made to the rest of the group for information received.

# XXV Productivity Effects: Statistical Results

This chapter gives the main results of our research into productivity effects. Except where the contrary is stated, the figures for 'net gain through knowledge-sharing' are to be taken as measuring the amount which has to be added to the recorded profits of the overseas subsidiary, rather than the true gain which that process brings – for reasons which have been discussed at length in the preceding chapter.

As we only asked for the figures for one year (1964, the last year covered by our main enquiry) the results have where possible been related to the assets at the beginning of that year (i.e. end-1963), on the same principle as we used for profits.[1] In percentage form it is reasonable to add this gain to the average percentage for profits, taken over the whole survey period.

## A. Analysis by Industry

Table XXV.1 goes straight to the heart of the matter by giving the net gain for each industry, and relating it first to net operating assets and then to U.K. stake. Since the benefit which knowledge-sharing brings to the group (and so to the U.K.) is essentially independent of the size of minority interests in the oversea subsidiary, the numerator of this fraction is the same in each case, so that the percentage of U.K. stake is higher.

The figures given in the table – roughly 0.8 per cent and 1.0 per cent respectively for manufacturing as a whole – may seem rather low in view of our consistent attempts to ensure that we were getting an upper limit; but in large measure this reflects the fact that the benefit from the flow of knowledge, made possible by overseas investment, accrues to a great extent in the form of oversea profits, rather than payments by the subsidiaries to the U.K. for research and know-how. The lowness of the figures also reflects the need to deduct the payments which the companies reckoned that they would have received as licence fees, if they had not been producing themselves in the various countries.

We shall explore the above point further in the course of this chapter, but first we should note the substantial differences between the figures for different industries. It is not perhaps surprising to find Chemicals at the top of the list, with 3 per cent on U.K. stake, since the flow of knowledge is clearly of great importance in such an industry.

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[1] For the country figures, our records were unfortunately in such a form that we had to use 1964 assets as the denominator, but the difference is seldom of any importance to the picture.

Table XXV.1. Gain to the U.K. from knowledge-sharing, by industry

| Industry | Net gain from knowledge-sharing (1964) | Net gain as % of: | |
|---|---|---|---|
| | | (a) Net operating assets (end-1963) | (b) U.K. stake (end-1963) |
| | (£ million) | | |
| Chemicals | 5.55 | 2.3 | 3.0 |
| Non-electrical Engineering | 0.33 | 1.4 | 1.7 |
| Food, Drink, Tobacco, etc. | 4.69 | 0.8 | 0.9 |
| Electrical Engineering | 0.60 | 0.7 | 1.0 |
| Vehicles & Components | 0.95 | 0.7 | 0.9 |
| Building Materials, etc. | 0.26 | 0.3 | 0.4 |
| Metals & Metal Products | 0.47 | 0.2 | 0.4 |
| Paper | 0.07 | 0 | 0.1 |
| Textiles | 0 | 0 | 0 |
| Total Manufacturing | 12.93 | 0.8 | 1.0 |
| Total Manufacturing – on replacement cost basis | *12.93* | *0.7* | *0.9* |
| Mining[a] | 0.60 | 0.4 | 0.7 |
| Total of above | 13.53 | 0.7 | 1.0 |

*Notes*: The 'net gain' is the amount to be added to profits, as recorded, not the 'true' gain: see Chapter XXIV.

[a] Includes only those mining companies that reported feed-back (see p. 388). Plantations are omitted, as all items are small or zero.

## Composition of Net Gain

These figures are perhaps easier to understand with the aid of Table XXV.2, which shows how the net figure is arrived at, industry by industry.

For the reporting companies as a whole, it will be seen that the three positive items are all of the same broad order of magnitude, with the payments made by overseas subsidiaries for information supplied as the smallest. This item is well below the amount which might more 'correctly' have been charged to them (with

Table XXV.2. Composition of gains from knowledge-sharing, by industry (1964; £'000)

| Industry | Credit items | | | Deductions | | NET GAIN |
|---|---|---|---|---|---|---|
| | Payments for information by subsidiaries | Formal research useful to rest of group | Value of informal know-how | Income from licences foregone | Other[a] deductions | |
| Chemicals | 1,258 | 3,474 | 2,110 | 950 | 339 | 5,553 |
| Non-electrical Engineering | 113 | 711 | 45 | 135 | 405 | 329 |
| Food, Drink, Tobacco, etc. | 1,479 | 646 | 3,450 | 843 | 42 | 4,690 |
| Electrical Engineering | 1,702 | 64 | 125 | 1,236 | 54 | 601 |
| Vehicles & Components | 1,151 | 1,314 | 320 | 1,400 | 433 | 952 |
| Building Materials, etc. | 252 | 40 | 20 | 50 | 0 | 262 |
| Metals & Metal Products | 257 | 10 | 500 | 273 | 25 | 469 |
| Paper | 31 | 100 | 65 | 120 | 3 | 73 |
| Textiles | 0 | 10 | 25 | 35 | 0 | 0 |
| Total Manufacturing | 6,243 | 6,369 | 6,660 | 5,042 | 1,301 | 12,929 |
| Mining[b] | 265 | 458 | 60 | 108 | 77 | 598 |
| Total of above | 6,508 | 6,827 | 6,720 | 5,150 | 1,378 | 13,527 |

[a] Cost of research done specifically for overseas subsidiaries, *plus* payments by rest of group to overseas subsidiaries. The cost of transferring information is assumed negligible.

[b] Includes only those mining companies that reported feed-back.

consequential reduction in their profit figures) – a subject to which we return in the last section of this chapter. Its lowness is emphasised by the fact that it only modestly exceeds the companies' estimate of the additional licence fees etc. which might have been obtained if they had not been producing overseas (which is itself almost certainly an under-estimate, since our policy was to get an upper-limit figure for positive items and a lower-limit one for deductions). It was plain that in many cases valuable knowledge was being passed to subsidiaries in countries from which the company reckoned that little or no licence revenue could have been secured, but the absence of any charge concealed the fact that this is a way of making use of knowledge which would go to waste without overseas production.

As between industries, the pattern is very varied. The figures for Chemicals are all high (including the deductions), but the overseas research figure is exceptional accounting for well over half the manufacturing total. (As a rough yardstick, Chemicals is about one-eighth of the manufacturing total, in terms of assets). The high position of Non-electrical Engineering (which represents under 2 per cent of the total manufacturing assets) also reflects a very high figure for overseas research – which is however partly off-set by a large payment from the rest of the group. Electrical Engineering (under 5 per cent of the sample by assets) accounts for one-quarter of the total, both for payments by subsidiaries and for licences foregone, owing to the high figures for certain consumer goods.

## Relationship with Profits

Since we have defined the knowledge-sharing benefit in such a way as to make it complementary to our profit figures, the first thing to do is to put them together, and this is done in Table XXV.3. Again, we give figures in relation to both operating assets and U.K. stake; both profit rates are expressed after overseas tax, as we are concerned with the benefit to the U.K.

Table XXV.3. Return from profits and knowledge-sharing – subsidiaries of manufacturers

(Percentages)

| Industry | Return on net operating assets. (1) Post-tax profits | (2) Gain from knowledge-sharing | (3) (1) & (2) combined | Return on U.K. stake (4) Post-tax profits | (5) Gain from knowledge-sharing | (6) (4) & (5) combined |
|---|---|---|---|---|---|---|
| Building Materials, etc. | 13.8 | 0.3 | 14.1 | 13.7 | 0.4 | 14.1 |
| Food, Drink, Tobacco, etc. | 8.5 | 0.8 | 9.3 | 8.8 | 0.9 | 9.7 |
| Textiles | 8.0 | 0 | 8.0 | 7.7 | 0 | 7.7 |
| Chemicals | 7.7 | 2.3 | 10.0 | 8.4 | 3.0 | 11.4 |
| Metals & Metal Products | 6.8 | 0.2 | 7.0 | 7.4 | 0.4 | 7.8 |
| Paper | 6.2 | 0 | 6.2 | 7.7 | 0.1 | 7.8 |
| Electrical Engineering | 5.6 | 0.7 | 6.3 | 5.4 | 1.0 | 6.4 |
| Vehicles & Components | 5.3 | 0.7 | 6.0 | 5.0 | 0.9 | 5.9 |
| Non-electrical Engineering | 5.3 | 1.4 | 6.7 | 4.5 | 1.7 | 6.2 |
| Total | 7.7 | 0.8 | 8.5 | 8.1 | 1.0 | 9.1 |
| Total (adjusted[a]) | *5.3* | *0.7* | *6.0* | *5.5* | *0.9* | *6.4* |

*Notes*: Columns (1) and (4) are 9-year averages; (2) and (5) were calculated by dividing the gain from research, etc. in 1964 by assets at end-1963.

[a] Calculated on replacement cost basis, with stock appreciation eliminated.

As the industries have been arranged in descending order of profitability it is easy to see that there is very little correlation, either positive or negative, between profitability and benefit from knowledge-sharing: the order of the figures in the knowledge-sharing column is higgledy-piggledy. In view of the above – and of the relatively small figures for knowledge-sharing – the order of the industries is not much changed when this item is added to the plain profit percentage, though there are some movements – notably rises for Non-electrical Engineering and Chemicals and a fall for Paper.

## B. Country Analysis of Feed-back

It is obviously of considerable interest to analyse the results by country – to see, for example, which countries yielded on average a big feed-back of knowledge in proportion to the amount of capital invested, or which ones showed a big net gain (allowing for the other items involved), and how far the experience in individual cases diverged from the average. This analysis presents considerable technical difficulties, owing to the way in which the data was collected (which in turn reflected the need to keep demands on the companies down to the minimum); but on the important points we have data which covers most of the total, and we have tried to fill it out by estimating the country allocation for the remainder.

This section deals with the feed-back of knowledge from the subsidiaries to the rest of the group – an item which is difficult to estimate, but for which the results are not affected by the vagaries of accounting practices. It is the sum of two items: research done by the subsidiary which is useful to the rest of the group (valued at cost) and the estimated value of informal know-how transmitted to the rest of the group.

First, we can show fairly clearly how much capital is invested in subsidiaries from which the companies reckon that they receive no significant feed-back of useful knowledge. The border-line between 'some' and 'none' is of course bound to be a little arbitrary, but Table XXV.4 conforms with the companies' reactions to our question.

It will be seen that 89 per cent of the capital in U.S.A. is in subsidiaries which are reckoned to yield a significant feed-back of knowledge, but that for most countries the proportion is *nil*, and for the world as a whole it is only 41 per cent. Although the table does not reveal the fact, the proportion *by number* of subsidiaries which yield a significant feed-back is much smaller.

Table XXV.5 takes the subsidiaries which gave a significant feed-back of knowledge, and shows the value of it for each country, divided between the two types. Since we know that there was some feed-back from other subsidiaries, mainly of an 'informal' kind, the table also includes an estimate of the *total* feed-back from each of these countries, and also a figure for the rest of the world. The value of the feed-back is expressed as a percentage of the relevant figure for net operating assets, so that for each country we have one percentage for those companies which gave a significant feed-back, and a lower one for the whole lot. Since this

Table XXV.4. Subsidiaries with significant 'feed-back', by country (Subsidiaries of manufacturing[a] companies only; £ million; 1964)

| Country | Net operating assets: All subsidiaries | Net operating assets: Subsidiaries with significant feed-back | Percentage with significant feed-back |
|---|---|---|---|
| U.S.A. | 328 | 292 | 89 |
| West Germany | 60 | 44 | 74 |
| Australia | 313 | 213 | 68 |
| Canada | 418 | 201 | 48 |
| France | 34 | 15 | 44 |
| India | 133 | 33 | 24 |
| South Africa | 132 | 15 | 12 |
| All other countries | 546 | 0 | 0 |
| World | 1,964 | 813 | 41 |

[a] Including mining companies with significant feed-back.

latter figure is the one with the greatest economic significance, the countries have been arranged in descending order of its size.

Table XXV.5 may largely be left to speak for itself, but a few brief comments may be useful. It shows, for example, that the value of feed-back is considerably greater for the United States than for any other country – accounting for £5.0 million out of a total of £13.6 million – but that West Germany shows a decidedly higher return in proportion to assets – 2.5 per cent against 1.5 per cent. It is also interesting to see that Canada comes third on the list, and that India is included as a source of knowledge. Denmark, Italy, Argentina and Brazil do not appear on the list, but one must remember that our sample included very few subsidiaries in Denmark and Italy, and not many in the South American countries.

So far as the composition of the feed-back is concerned, the most noteworthy point is that subsidiaries in the United States show a figure for informal know-how which is almost twice as high as that for research of use to the rest of the group, whereas in almost all other countries the latter is the higher (for subsidiaries contributing a significant feed-back). This result was to be expected: the United States is an expensive place in which to do research, so that where possible research tends to be done by the parent company and its results transmitted to the U.S.A., but it is a great source of general expertise. This informal know-how was, indeed, valued by the companies at the equivalent of 1 per cent per annum on the operating assets, which is a considerably higher return than for any other country. West

Table XXV.5. Feed-back of knowledge and net operating assets, by country

(Subsidiaries of manufacturing companies[a]; £ million; 1964)

| Country | Subsidiaries yielding significant feed-back | | | | | All Subsidiaries (partly estimated) | | |
|---|---|---|---|---|---|---|---|---|
| | Research | Informal know-how | Total knowledge | Net operating assets | Knowledge as % of net operating assets | Knowledge | Net operating assets | Knowledge as % of net operating assets |
| West Germany | 1.14 | 0.31 | 1.45 | 44 | 3.30 | 1.5 | 60 | 2.47 |
| U.S.A. | 1.64 | 3.30 | 4.94 | 292 | 1.69 | 5.0 | 328 | 1.51 |
| Canada | 1.97 | 1.36 | 3.33 | 201 | 1.66 | 3.4 | 418 | 0.81 |
| France | 0.19 | 0.03 | 0.22 | 15 | 1.47 | 0.2 | 34 | 0.72 |
| Australia | 1.25 | 0.82 | 2.07 | 213 | 0.97 | 2.1 | 313 | 0.68 |
| India | 0.34 | 0.13 | 0.47 | 33 | 1.42 | 0.5 | 133 | 0.37 |
| South Africa | 0.01 | 0.16 | 0.17 | 15 | 1.13 | 0.2 | 132 | 0.14 |
| Other countries | 0 | 0 | 0 | 0 | 0 | 0.7 | 546 | 0.12 |
| World | 6.54 | 6.11 | 12.65 | 813 | 1.56 | 13.6 | 1,964 | 0.69 |

[a] Includes figures for mining companies that reported feed-back.

Germany, on the other hand, owes its top position to a flow of useful research equal to some 2 per cent on the operating assets.

This dis-aggregation of the 'knowledge return' makes it a good deal easier to understand why Germany came so much higher than the United States, but it is nevertheless pertinent to ask how far it might also be explained in terms of 'industry-mix': is it simply a case of subsidiaries in Germany being concentrated in industries for which feed-back is large?

In view of the small number of companies involved – and the need to preserve confidentiality – we cannot give a very definite answer, but a brief investigation showed that the industry-mix factor is indeed an important one. Table XXV.6 divides the U.S.A. and German subsidiaries into two broad groups – those in 'high-gain industries' (i.e. the four industries which gave the highest feed-back in proportion to assets, as deduced from Table XXV.3) and the rest. The result which emerges is that in the first group the two countries show almost the same rate of feed-back return – about 2.7 per cent – and in the second group the return is negligible in both countries; Germany, however, has very little British capital in the second group.

Table XXV.6. Analysis of feed-back from United States and West Germany

(Subsidiaries of manufacturing companies[a]; £ million; 1964)

| | United States | | West Germany | | Feed-back as % net operating assets | |
|---|---|---|---|---|---|---|
| | Net operating assets | Feed-back | Net operating assets | Feed-back | U.S.A. | W. Germany |
| 'High-gain' industries[b] | 176 | 4.7 | 53 | 1.5 | *2.7* | *2.8* |
| 'Low-gain' industries[a] | 152 | 0.3 | 7 | 0 | *0.2* | *0* |

[a] Including those mining companies with feed-back.

[b] The four industries which reported the highest percentages of feed-back on net operating assets (for all overseas countries); namely – Chemicals, Non-electrica Engineering, Food, Drink, Tobacco, etc. and Vehicles & Components.

It would be a gross over-simplification to say that the affair is *wholly* one of different industry-mix: the differences between the rates of feed-back are very great for each of the four high-gain industries taken individually, with each country having the advantage in two of them. Nevertheless, it is clear that this particular difference cannot be understood without delving below the aggregate figures into the industry details.

## C. Country Analysis of Knowledge-Sharing

For the net gain from knowledge-sharing as a whole, the main country figures are given in Table XXV.7. In broad outline the picture is almost absurdly similar to that given for feed-back in the last two columns of Table XXV.5: by and large, the other items which go into net gain tend to cancel out, not only in the aggregate but also in individual countries – though there are naturally some important exceptions.

Table XXV.7. Gain to the U.K. from knowledge-sharing

(Subsidiaries of manufacturing companies[a]; 1964)

| Country | Net gain from research, etc. | Net Gain as % of: (i) Net operating assets | (ii) U.K. stake |
|---|---|---|---|
| | (£ million) | | |
| W. Germany | 1.46 | 2.5 | 2.7 |
| U.S.A. | 4.78 | 1.5 | 1.9 |
| France | 0.50 | 1.5 | 2.2 |
| Canada | 3.09 | 0.7 | 1.4 |
| Australia | 2.19 | 0.7 | 0.9 |
| India | 0.78 | 0.6 | 0.8 |
| South Africa | 0.13 | 0.1 | 0.1 |
| All other countries | 0.60 | 0.1 | 0.1 |
| Total | 13.53 | 0.7 | 0.9 |

[a] Including those mining companies with feed-back.

Once again Germany comes 'top of the league', a good deal ahead of the U.S.A., despite the fact that in absolute terms the latter accounts for one-third of the total gain. An analysis was done to see how far this is merely a matter of industry-mix, and the results were very similar to those given for feed-back in Table XXV.6: the high-gain industries showed much the same percentage return for each country, and for the low-gain industries both figures were small. Industry-mix is therefore a major element in producing the contrast.

The figures for knowledge-sharing are set alongside those for profits in Table XXV.8. It is unfortunately not possible to break down the figure for knowledge-sharing for the countries grouped as 'other': there is a strong general presumption that for any particular country it would represent a very small percentage of the assets involved, but it always *might* be a significant positive item (e.g. because some of the subsidiaries in that country had been charged a substantial amount for know-how) or a significant negative item (because large licence fees had been foregone).

Table XXV.8. Return from profits and knowledge-sharing

(Subsidiaries of manufacturing companies[a]; percentages)

| Country | Return on net operating assets | | | Return on U.K. stake | | |
|---|---|---|---|---|---|---|
| | (1) Post-tax profits (9-year average) | (2) Net gain from knowledge-sharing (1964) | (3) (1) & (2) combined | (4) Post-tax profits to U.K. (9-year average) | (5) Net gain from knowledge-sharing (1964) | (6) (4) & (5) combined |
| West Germany | 22.6 | 2.5 | 25.1 | 22.8 | 2.7 | 25.5 |
| South Africa | 10.0 | 0.1 | 10.1 | 10.4 | 0.1 | 10.5 |
| U.S.A. | 9.0 | 1.5 | 10.5 | 8.6 | 1.9 | 10.5 |
| India | 9.0 | 0.6 | 9.6 | 8.6 | 0.8 | 9.4 |
| Australia | 8.2 | 0.7 | 8.9 | 7.6 | 0.9 | 8.5 |
| Canada | 5.3 | 0.7 | 6.0 | 5.5 | 1.4 | 6.9 |
| France | 3.0 | 1.5 | 4.5 | 1.9 | 2.2 | 4.1 |
| All other countries | 6.9 | 0.1 | 7.0 | 7.8 | 0.1 | 7.9 |
| World | 7.7 | 0.7 | 8.4 | 8.1 | 0.9 | 9.0 |

[a] Including mining companies which reported significant feed-back.

As the countries are arranged in descending order of profitability, one can judge broadly whether profitability and knowledge-sharing are positively or negatively correlated by seeing whether the figures for the latter are in descending or ascending order. In fact, however, the order is again higgledy-piggledy: the first country – West Germany – has the highest return from knowledge-sharing, but the second one – South Africa – has the lowest.

Similarly, the addition of the gain from knowledge-sharing does very little indeed to alter the order of the countries when we look at the combined returns in columns (3) and (6).

## D. 'True' Figures for Knowledge-Sharing

As was emphasised repeatedly during the preceding chapter, the fundamental object of our research was to establish how much should be added to the recorded profits of a subsidiary, in order to assess the total loss to the group which its disappearance would cause – rather than the 'true' gain from the sharing of knowledge as such, which should be independent of the particular system of book-keeping adopted by the group.

The latter concept is however of considerable interest in itself; moreover an idea of its size would be useful for helping people, who may find our figures surprisingly small, to reconcile them with their ideas about the importance of knowledge-sharing. This section explores briefly the questions involved, in an attempt to establish the order of magnitude.

So long as we are concerned with the type of one-subsidiary-at-a-time change discussed in this report, and so long as we are concerned with the effect *on the group* of losing (or gaining) a subsidiary, the 'intellectual' problems involved in the changed concept are not very difficult: they are in fact limited to changing the two 'payments' items in our calculation (numbers (1) and (6) in Table XXIV.1) from their *actual* size to 'what they should have been'[1]. The basic elements in the gain from having an extra subsidiary can still be thought of in the same way:–

(a) The rest of the group gets its own research cheaper, because it is able to charge part of the cost to the new subsidiary (but we must not include in this charge any payment for additional research done specially for this subsidiary and – more important – we must deduct any loss of licence revenue).

(b) The group gets the benefit of research done by the new subsidiary which we value at the (full) cost of that part of its research which is not 'of local interest only', in return for a payment equal to part of that cost.

(c) There is a gain to the group from informal know-how derived in the new subsidiary.

How then do we arrive at revised figures for the payments items? Rather different considerations arise in each case.

### Payment for Research in U.K.

The total amount of research and development expenditure done in the U.K. by our sample in 1964 was as follows:–

| | |
|---|---|
| Market research | £ 7 million |
| Production research and development | £ 109 million |
| Total | £ 116 million |

It is tempting – and indeed useful as setting an upper limit – to apply 'pro-rata' principles and say that the U.K. research costs should be allocated between

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[1] This phrase is to be taken in its economic sense only. In some cases there are legal difficulties in charging oversea subsidiaries for research, or the amounts may be limited by concern for minority shareholders to a figure which is 'clearly justifiable'.

Country X and the rest of the group in proportion to output. Moreover the same simple rule can be applied in turn to each subsidiary, and we can say that the total amount payable by the oversea subsidiaries would be a pro-rata share of the U.K. expenditure, given by the share of overseas output in the total for the group. This gives a total overseas allocation of £42 million in respect of U.K. research.

The above principle might appear to correspond with a long-term system of arms'-length pricing, such as might be used between independent companies – which is what we want. There are however some awkward snags.

One important difficulty is that some at least of the U.K. research, especially on marketing, is likely to be 'essentially of relevance to the U.K. only' – to adapt the phrase which we used for overseas subsidiaries on our form – so that none of this should be charged out. In principle an estimate might be requested for this, but it would usually be a much more difficult question to answer than it was in relation to overseas subsidiaries.

A more fundamental difficulty is that in a multi-product company the calculation should logically be done on a product-by-product basis, or at least division by division: the ratio of research to production is likely to be higher in the new and developing products, many of which are probably not produced in the overseas subsidiary, and it may be very low in the staple products which the subsidiary does manufacture.[1] The calculation is therefore likely to produce an over-estimate on this score also.

Since it is often useful to have an upper limit, however, the computation below starts by giving a figure based on straight pro-rata principles. An alternative figure is also produced – rather arbitrarily – by first eliminating from the U.K. expenditure the same proportions (57 per cent for 'marketing' and 30 per cent for 'production') as emerged for all the overseas subsidiaries with significant feedback, taken together; these proportions are doubtless too high to represent research which is 'of U.K. interest only because it is specifically adapted to U.K. conditions', but they thereby make some allowance for the second factor also. This gives a figure of £29 million in place of £42 million.[2]

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[1] We do not have to worry about the simpler argument, that the subsidiary 'does not cover the whole range of products, and so should not be charged for types of research of which it makes no use': in itself, this limited coverage means that its output is correspondingly low, and if the total for research is to be analysed by commodity, one can say that the over-charge on the items which it does not make is off-set by the fact that it is correspondingly under-charged for research on products which it does make. The trouble comes from the tendency for subsidiaries to concentrate on staple products with a low ratio of 'expenditure on research' to 'group output'.

[2] The calculations in the table in fact covered the small amount of 'generally useful' research done by subsidiaries outside Country X, as well as research in the U.K.; part of that expenditure should similarly be allocated to Country X.

## Payments for Research in Country X

Here we have the advantage of the companies' estimates of how much of the research expenditure was of local use only, so that we can eliminate this. The formal problem is then to estimate how much of the remainder 'should' be charged to the rest of the group. In the calculation of net gain, this amount will then appear as a deduction from the value of the useful research, which we take as equal to its cost; it is in some ways easier to invert the problem and discuss how much should be charged to the Country X subsidiary, since this in fact equals the 'true' net benefit to the rest of the group.

It is useful to start by emphasising that the amount at stake is relatively small. The total amount of research which was useful to the rest of the group was under £7 million, which compares with £29 million as the *smaller* of the two figures discussed above for the amount to be charged out for U.K. research: we do not need to be very pernickety over the less important points.

The simplest approach, corresponding with the one indicated above, is to argue that for each company the cost of the 'generally useful' research in Country X should be divided between Country X and the rest of the group in proportion to production in each area.

This gives however too low a figure for the amount to be allocated to Country X, because its output is typically concentrated in a narrower field than production for the group as a whole. In contrast to the position portrayed in the footnote on page 328 above, this means that production in Country X is concentrated on lines with a high ratio of 'research expenditure in Country X' to 'production in the group'. The resultant figure is therefore unsuitable for use in our 'upper limit' calculation, and is used for the alternative.

For the upper limit we can – at the risk of a rather high 'exaggeration factor' in this item – equate the benefit under this head to the full cost of the 'useful' research done in Country X, less only the (very low) payments actually made to Country X by the rest of the group.

We then get the picture given in Table XXV.9. From this it will be seen that on the 'modified' basis – which is the more realistic – the net gain represents a return of nearly 2 per cent on the book value of net operating assets and of 2½ per cent on the U.K. stake; if the assets are revalued at replacement cost, these figures are slightly reduced.

Two points need to be made in relation to these results. First, they show that the main constituent in the gain from knowledge-sharing lies in the fact that overseas subsidiaries can use the results of research done by their U.K. parent without any further cost to the group. Admittedly our estimate for this item may be on the high side, for three reasons:–

(a) It assumes that the addition of an extra subsidiary will not add anything to the expenditure on research in the U.K. which would not have been worthwhile anyhow, apart from research done specially for that subsidiary.

(b) It ignores the additional cost of transmitting the information from the U.K. to the subsidiaries.

Table XXV.9. 'True' gain from knowledge-sharing

(All subsidiaries of manufacturing groups;[a] £million; 1964)

| Item | 'Extreme' estimate | 'Modified' estimate |
|---|---|---|
| (a) *Saving in cost of research done by rest of group* | | |
| (i) Payments 'due' from Country X | 44<br>(42 for U.K.) | 31<br>(29 for U.K.) |
| *less* (ii) Cost of special research done for X | –1 | –1 |
| and *less* (iii) Additional income from licence fees foregone | –5 | –5 |
| Net saving[b] | 38 | 25 |
| (b) *Research obtained cheaply from Country X* | | |
| (i) Value to rest of group | 7 | 7 |
| *less* (ii) Payment 'due' to X for this research | –1 | –5 |
| Net gain | 6 | 2 |
| (c) *Value to rest of group of informal know-how originating in X* | 7 | 7 |
| 'True' net gain (a + b + c) | 51 | 34 |
| Net gain as percent of: | | |
| Net operating assets (book value)(%) | *2.8* | *1.9* |
| Net operating assets (replacement cost basis)(%) | *2.5* | *1.7* |
| U.K. stake (book value)(%) | *3.7* | *2.5* |
| U.K. stake (replacement cost basis)(%) | *3.3* | *2.2* |

[a] Including mining companies which reported significant feed-back.

[b] The costs of transmitting information have been ignored.

(c) The estimated income from licence fees foregone is on the low side.

Nevertheless, as a generalisation we can say that this extended use of knowledge acquired in the U.K. is the important item, rather than the technological feed-back from the subsidiaries, even though that item can be very important in particular cases. In part, of course, this reflects the fact that a great deal of U.K. investment is in industrially less advanced countries.

Secondly, it is clear from this table, especially taken together with Table XXV.3, that the gain from knowledge-sharing is an important factor in relation to the total return obtained from overseas subsidiaries; the common practice is for most of this gain to be incorporated in the overseas profits of the subsidiaries, rather than to appear as a separately visible item, but this does not make it any less real. We shall be considering this matter further in the final chapter.

# XXVI The Over-all Picture

The title of this chapter is a bit of a fraud: it is not possible to put into one chapter an over-all picture of so vast a subject. Nor are we attempting to list here all the numerous findings from the research, or even to give a comprehensive guide to them; that task is attempted in the Summary below.

Nevertheless it seems right to attempt, at the end of a two-volume report, to bring the main issues into some sort of general focus. We shall in fact be dealing mainly with those treated in Part V, because the effect on the national income provides the natural framework for an over-all review: we also take the opportunity to remind the reader of some of the things which have been left out or sketched very lightly.

## A. General Nature of the Results

To start with this negative side, let me simply list the following points:-

(a) We have made no attempt to cover all types of direct investment overseas. The Interim Report discussed this matter at some length in Appendix B (pages 138–40), and we have now added a sample of plantation companies (described in Appendix I); but we have had to abandon the hope of assessing the effects of overseas investment by the oil companies.

Putting the matter positively, the heart of the research lies in the study of the subsidiaries of manufacturing companies — a sufficiently big and varied field in itself to tax any organisation's resources — with valuable extensions into mining and plantations.[1]

(b) To make the picture manageable we have had to simplify it in many ways. The process of development of an overseas subsidiary is usually one of dynamic change, with the effects of overseas investment altering from one stage to another:[2] we have not attempted to produce statistics showing this development as a historical process, but rather to take a composite picture of the average effects of all the developments taking place in one period.

(c) The effects of overseas investment have been simplified by dividing them into two main categories: 'initial effects' which take place when the investment is being done, and 'continuing effects' attributable to that investment, taken as an average over all subsequent years.

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[1] The U.S. Report by Hufbauer and Adler was confined to subsidiaries of manufacturers.

[2] See the Interim Report, page 33, for a brief account of a typical process.

(d) Our main results have necessarily to be given in the form of *averages*. We have of course given separate figures for investment done by U.K. companies belonging to different industries, and also for investments done in different countries; these serve incidentally as a statistical reminder of our oft-repeated statement that the sort of over-all averages discussed in this chapter (and also in the final chapter of the Interim Report) conceal a great deal of diversity. But it is important to remember that this diversity persists into the next stage of analysis – i.e. when one considers the experiences of individual companies within one industry, or operating within one country. We have given some indications of these inter-company variations in experience in the enlarged version of Table IV.8, on page 359; but in the main we have had to be content with verbal reminders of the importance of this element.

Next, we should remember some fundamental points of definition or (horrible word!) methodology.

(i) We have been concerned to assess 'the effects of overseas investment' in the sense of what the consequences would be of doing rather less or rather more, and *not* to make a comparison with the totally different position which would emerge if all the overseas subsidiaries were to disappear: this seems to be the only question which is of practical interest, and it is the only one which our techniques are capable of answering. For this reason, all our results are expressed 'per £100 invested' in one sense or another, and not as absolute aggregates.

(ii) Our results are based on the assumptions set out in Appendix C, which we believe to represent a reasonably good approximation to the conditions actually prevailing in the period considered. It would be quite illogical to apply the results (for example) to conditions of general slump, because the economic reactions would then be of a different character, quite apart from the changes in (say) the level of profits.

(iii) In the nature of the case, the numerical values found for the various 'effects' are liable to change from one period to another, even though the basic assumptions about government policies and the like remain unchanged. This is a matter on which one can only leave each reader to make his own assessment (or guess) about the alterations which he expects to take place in the period in which he is interested: we can do no more than provide a base.

## B. Direct Effects on the National Income

As was explained in Chapter XXIII, the main direct effects on the national income are those which accrue through the level of profits earned by the overseas subsidiaries (as contrasted with the relevant alternatives) and through the effects which an additional (or enlarged) subsidiary has on the productivity of the rest of the group.

It should perhaps be emphasised that so far as these direct effects are concerned we are dealing only with 'continuing' effects. The 'initial' effects on the U.K. national income of actually doing overseas investment are necessarily zero on our assumptions, at least to a close approximation, because we assume that the level of employment and activity in the U.K. will not be significantly changed; in national accounts terms this reflects the fact that the effects of doing rather more overseas investment will be an increase in exports equal to 11 per cent of the amount involved, but this will be matched by a corresponding decrease in home investment.

On different assumptions about the U.K. economy it would, of course, be possible to arrive at the conclusion that overseas investment would have a significant initial effect on the U.K. national income, but such assumptions did not seem to us realistic in relation to the circumstances of the period considered. If, for example, the country were in the depths of a slump, then the extra exports generated by the overseas investment would not be matched by a fall in home investment, unless the government chose to pursue such a policy: it would be more reasonable to expect that the additional exports would start a 'multiplier' process, whereby the extra incomes of those engaged in the export trade would lead to additional consumption, and so to additional employment and incomes in the trades producing consumer goods – and very possibly also to additional home investment. This process, would, of course, also involve an increase in imports, so that the balance of payments would suffer; but all these considerations belong to a set of assumptions which would not have been realistic in the period considered.

## Profits and Knowledge-sharing

Table XXVI.1 shows, for the whole sample, the level of post-tax profits and the net gain from knowledge-sharing (in the sense of the amounts which should be added to the profits as recorded), expressed first as a percentage of the net operating assets and then as a percentage of the U.K. stake. The figures are in conventional book-keeping form, without adjustment to a replacement cost basis and without any deduction for stock appreciation.

To some extent this table duplicates Table XXV.3, and for that reason it does not repeat the figures for the individual manufacturing industries: it is necessary, however, to have a table covering the whole field, rather than one which is confined to the part of it for which knowledge-sharing yielded positive benefits, in order to see the whole picture.

These figures represent the 'positive' items in the assessment of the continuing effect of overseas investment on the national income. As was stressed in Chapter XXIV the division between 'profits' on the one hand and 'gain from knowledge-sharing' on the other is very much influenced by book-keeping practices, but the total is not seriously affected by these. It needs to be set against the contribution which might have been made to the national income by the £100 in the absence of the overseas investment: in the main, the alternative to the overseas assets would have been the avoidance of international obligations, or the accumulation of portfolio assets abroad, rather than an increase in real assets in the U.K., but the relevant comparison is with the return on £100 of

Table XXVI.1. Returns from overseas subsidiaries

| Item | Manufacturing | Mining | Plantations | Whole sample |
|---|---|---|---|---|
| *Returns as % of net operating assets* | | | | |
| Post-tax profits, as recorded | 7.7 | 12.3 | 9.3 | 8.2 |
| 'Additional' gain from knowledge-sharing[a] | 0.8 | 0.3 | 0 | 0.7 |
| Total income return | 8.5 | 12.6 | 9.3 | 8.9 |
| Ditto, plus capital appreciation | 10.9 | 21.9 | 7.7 | 11.5 |
| *Returns as % of U.K. stake* | | | | |
| Post-tax profits, as recorded | 8.1 | 14.4 | 9.6 | 8.7 |
| 'Additional' gain from knowledge-sharing[a] | 1.0 | 0.4 | 0 | 0.9 |
| Total income return | 9.1 | 14.8 | 9.6 | 9.6 |
| Ditto, plus capital appreciation | 12.1 | 26.9 | 7.9 | 13.0 |

*Notes:* All figures of profits and assets are on basis of conventional accountancy.

a This is the gain which has not been included in profits.

alternative assets of one kind or another. In this respect, the position is different from that which we encountered on page 278, when trying to assess the effect on the current account of the balance of payments: there it was a matter of setting the profits on £100 of overseas assets against the financing charge on £89, since we were not directly concerned with the loss of income from £11 of capital inside the U.K., but only with the financing charge on £89 of overseas 'obligations'.

## Manufacturing

The confrontation of the return from overseas investments with that of an equal value of alternative assets can be shown more clearly if we confine the field to the subsidiaries of manufacturing companies, since for them we have some approximate figures for the 'economic' return, in which the profits are calculated on a replacement cost basis, and with a deduction for stock appreciation. The figures on this basis are given in Table XXVI.2, showing a combined income of 6 per cent on net operating assets and 6.4 per cent on U.K. stake.

What should we take as our yardstick to set against these figures? We saw on page 278 that the most reasonable round figure to take for the external part of the alternative package was 3 per cent – the lowness of the figure being explained by the fact that we want a rate which represents a 'real' return, after allowing (in the case of money loans) for the decline in the value of money.

The external component of the 'alternative' capital represents £89 out of the £100 of net operating assets overseas for which we want an over-all rate of return.

Table XXVI.2. Returns from overseas subsidiaries of manufacturing groups

| Item | % of net operating assets [a] | % of U.K. stake [a] |
|---|---|---|
| Post-tax profits, adjusted [a] | 5.3 | 5.5 |
| 'Additional' gain from knowledge-sharing [b] | 0.7 | 0.9 |
| Total return | 6.0 | 6.4 |
| Estimated 'true' gain from knowledge-sharing [c] | 1.7 | 2.2 |

a Profits have been adjusted to a replacement cost basis, and a deduction made for stock appreciation; assets are on basis of replacement cost.

b This is the gain which has not been included in profits.

c This is the gain on the 'modified' basis used for Table XXV.9; it is already included in the total.

The remaining £11 should, as explained in Chapter XXIII, be thought of as capital used for non-industrial purposes in the U.K., and we want the pre-tax, post-depreciation return on it. This must of course again be a 'true' return, not a conventional profit rate calculated on historic cost and with no allowance for stock appreciation; if we approach its estimation by looking at the rate of interest which users of such funds were prepared to pay, we must allow for the declining value of money.

The estimation of an appropriate rate for this U.K. component is a task right outside the main field of our research; in view of its small weight in the over-all total we devoted little time to it, and we do not feel that we should quote a separate figure for it. We are satisfied that the most appropriate figure is above the rate for the external component of 3 per cent, but not sufficiently above it to call for the substitution of any other figure.[1]

In round figures, then – and certainly nothing more is justified – the 'true' return to the U.K. from the direct investments overseas of its manufacturing companies was 6 per cent a year, against an 'opportunity cost' of 3 per cent a year. This does not, however, take account of any indirect effects on the national income arising through the balance of payments, discussed in section C of this chapter.

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[1] As some slight elaboration of the above, one can make two simple points:-

(a) The rate on the U.K. component would have to be 8½ per cent to raise the weighted average to 3½ per cent (and even a zero rate would still lead to an average of 2¾ per cent).

(b) The average rate of interest received by building societies on mortgage advances was 6 per cent a year over the period, and retail prices were rising at 3 per cent a year. (We cannot of course measure the rise in prices which was *expected.*)

### Importance of Knowledge-sharing

One feature of Table XXVI.2 should be noted before we pass on to these indirect effects. Our estimates of the 'true' gain from knowledge-sharing are given in the bottom line of the table, and – despite their imperfections – the figures do emphasise the importance of this element. Thus even on the basis of net operating assets, knowledge-sharing represents 28 per cent of the total return, and if we take the return on U.K. stake, the proportion goes up to 34 per cent (because the value derived from sharing knowledge with a subsidiary is unaffected by the existence of outside creditors, etc., but the latter take part of the profits).

This process of knowledge-sharing is one of the hall-marks of 'direct' investment, as opposed to portfolio: the figures show that it provides a substantial reason for the size and persistence of such investment. Indeed, it is likely that much direct investment by manufacturers would be unattractive if it did not provide a means of extending the use of existing knowledge, at little or no additional cost to the investing group, where an independent local firm would have to buy the knowledge or acquire it the hard way.

## C. Indirect Effects through Balance of Payments

As was emphasised in Chapter XXIII, the effect of overseas investment – or indeed anything else – on the balance of payments is an interesting piece of knowledge, which may be highly relevant to policy decisions under particular circumstances, but which does not provide any direct, universally applicable guide to its merits or demerits. This section is little more than a reminder of that point, but seeks also to stress the complications of the matter, which spring very largely from the *time* element.

The relevance of the issue is most easily understood by taking the simple proposition that during the post-war years balance of payments crises have periodically led the government to pursue deflationary policies, which have improved our international reserves (or slowed their deterioration) by reducing the national income. Hence *any* factor which tended to weaken the balance of payments may be held to have led indirectly to a loss of national income, which has to be superimposed on any direct contribution which it might make if we want the total effect – and conversely for any factor which tended to strengthen the balance of payments. Moreover these indirect effects would be relevant even in non-crisis years, because a 'weakening' factor (for example) would lead to a smaller accumulation of reserves and so hasten, or worsen, the next crisis – or the government might be pushed into pursuing a permanent policy of restraint.

As was emphasised on page 131 of the Interim Report, it is in no sense part of the job of this report to discuss the policy problems which arise under such circumstances: policy decisions can only be taken after a full review of the alternatives, in terms of both feasibility and the desirability (or usually *un*desirability) of their other consequences. What we can, and should, do is to stress the familiar conflict between short-term and long-term advantages, so far as overseas investment is concerned; perhaps it is relevant to repeat the summarised conclusion about the balance of payments effects of overseas investment from page 130:-

(i) An average act of direct investment overseas will strengthen the future balance of payments on current account, – even after deducting the interest payable on the overseas borrowing (or the equivalent) by which, at least from the national point of view, such an act of investment is almost wholly financed.

(ii) In consequence, a steady rate of direct investment overseas would, if maintained long enough, provide enough of an annual surplus on current account to finance the annual quota of new investment.[1]

(iii) Nevertheless each single act of direct investment overseas has an immediate effect on the balance of payments (capital and current account together) which is far larger than one year's 'continuing' benefit, so that a restriction of the outflow brings a 'cash' or 'financing' benefit for a substantial number of years.

Thus we cannot say unambiguously that direct investment overseas either strengthens or weakens the balance of payments position: our terms have to be defined much more clearly, though to my mind the first of the above conclusions is the most important result of our research in this part of the field. Moreover a comparison of the present inflow of profits with the present outflow of capital gets us no further towards an 'operational' decision: it is obvious that the inheritance of a stock of overseas assets is an advantage – 'the bigger the better'. The only operationally meaningful questions relate to future policy. Here we can only say that a policy of restriction will bring an easing of the 'cash' problem for a substantial number of years, but at the expense of making the long-run problem worse – and the change-round can be accelerated by a vigorous policy of seeking long-term overseas finance for development abroad, as stressed in Chapter XVIII, section B.

## D. International Relations

In the above three sections we have been dealing essentially with the effects of overseas investment on the U.K: in particular, we have consistently worked with profits net of overseas tax. Two brief points are needed on a rather wider plane to round things off.

First, overseas investment has consequences for the host countries – in particular, the oversea government receives the tax which is not included in the returns to the U.K. This makes a contribution to one of our secondary national objectives especially where the oversea country is a less developed one.

We gave some material in Chapter XVI which is relevant for the assessment of these benefits, but we should stress that we did not attempt to carry the analysis very far: in particular, we did not explore the various possible assumptions which might be made about an 'alternative position' which would arise if the investment were not done by a U.K. subsidiary. It is possible, for example, that the tax revenue received from the British subsidiary might simply have been replaced by a corresponding revenue from an American one, if that would have been the alternative. Where, however, the alternative would have been 'no investment' or investment by a local firm with inexperienced management the advantages of having the British subsidiary might be very great:[1] in particular, one must not assume for an under-developed country that full employment (or something like it) will prevail anyhow, so that the gains from an outside supply of capital and/or good management may far exceed the tax revenue received.

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[1] In view of the misunderstandings mentioned on page 238 above, I should emphasise that the proviso at the end of point (i) applies here too, so that the 'surplus' is computed 'after deducting the interest payable on the overseas borrowing ... by which ... the investment is almost wholly financed'.

Our second point lies at the other extreme. When our companies invest in the more developed countries, the U.K. loses the benefit of the corporation tax on the profits from that capital, and the contribution to our national income has been shown as correspondingly reduced. When American companies invest in the U.K., however, the position is reversed: the U.K. Government receives the tax on the profits which they earn here, and this is part of our national income. A double-tax agreement with the U.S.A. provides for this treatment, and I have no doubt that the two-way movement of capital which this fosters is beneficial to both countries – but on a wide view (covering technological knowledge etc.) I would say that the benefit to the U.K. is a good deal bigger.

One cannot argue that a marginal reduction in the flow of direct investment to the U.S.A. and other developed countries would necessarily endanger the double-tax agreement – some countries might even welcome it for various reasons. But in assessing the gains from our overseas investment we should not forget that our loss of potential tax revenue to the host country has a counterpart on our side, which is particularly important in relation to the U.S.A.: we should above all avoid any action which might endanger a two-way flow from which both sides gain.

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[1] It would be necessary, for a full treatment, to bring *initial* effects into the picture, as well as continuing ones: much of the discussion in Chapter XIX is relevant here.

# SUMMARY OF BOTH REPORTS

The object of this summary is to provide a brief guide to the main findings of the whole survey. It is clearly not possible or desirable to give full definitions and explanations of the concepts employed, nor to mention alongside each result the exact coverage of the relevant figures and the various reservations to be borne in mind in interpreting them. The text is therefore generously supplied with references to the parts of the reports which deal with these very important points, and all statements in this Summary are to be interpreted as subject to the fuller definitions etc. indicated in the reports.[1]

The Summary is arranged in four parts, as follows:-

A. Concepts and Methods of Working

B. Effects on the Balance of Payments

C. Effects on the National Economy

D. Miscellaneous Findings.

This arrangement corresponds very broadly to the order in which subjects are treated in the reports, but related points have been brought together as far as possible, and the fourth part provides a home for various by-products of the research.

## A. Concepts and Methods of Working

The reports deal with the effects of direct investment abroad by British manufacturing, mining and plantation companies on the U.K. balance of payments and the economy generally (Chapter I). The main source of information was a set of detailed questionnaire forms completed by companies accounting for about three-quarters of the investment in the specified categories, supplemented by interviews with high-level officials (Appendices B, I, J, K). The comprehensive picture thus built up of the activities of the overseas subsidiaries and branches of these companies in the period 1955–64 constituted the 'historical record': this was compared with an explicitly defined 'alternative position' to yield estimates of the *effects* of U.K. companies having control over overseas assets.

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[1] No attempt is made in this Summary to explain any changes compared with the Interim Report.

It was intended at the outset that overseas investment by oil companies should also be included in the research. In the event, the historical record was compiled for oil (Chapter VIII), but it proved to be impossible to reach agreement with the companies on an acceptable basis for assessing effects (Introduction, page 207). This summary therefore covers the industrial categories mentioned above but excludes oil.

One of the principal findings of the research is the great diversity of experience in the field of overseas investment. Chapter III gives some idea of the range of activities represented. Most of the results to be quoted here are *annual averages* for all the industries covered and for all overseas countries together (or sometimes a list of 15 specified countries); underlying these averages are considerable differences between countries, between industries, between companies within industries, and between years.

## The Conceptual Framework

The assumptions underlying the research are set out rigorously in Appendix C and more briefly in Chapter II (page 23 and 28–9), and various points about these assumptions are discussed in Chapters XIX and XX. Crucial to our approach was the idea that the effects of overseas investment could be considered only by comparing the actual position with an alternative situation in which rather more (or rather less) investment had been undertaken. We therefore needed explicit assumptions both about what would have happened in host countries in the absence of particular U.K. investment projects, and about the policy objectives (and means of achieving them) followed by the U.K. Government.

The basic assumptions about U.K. Government policy employed in the enquiry are that the major preoccupation of the British Government was with full employment; that the degree of success in its macro-economic policy ('to maintain full employment and no more') would be much the same whether or not the (rather small) effects of changes in overseas investment were included in the variables to which adjustments had to be made; and that we could think of the extra demand for exports resulting from overseas investment as being made effective by the government taking steps – e.g. through monetary or fiscal policy – to restrain domestic investment correspondingly. (Appendix C and Chapter XX, sections C and D).

In general, the assumption for the alternative position where a particular U.K. subsidiary had not been established in a particular country was that a broadly equivalent operation would have been established by a non-U.K. company – either a local firm or a subsidiary of one registered elsewhere – with the U.K. company retaining no more than marketing operations in the country concerned. This was the basis on which the effects of direct investment in overseas countries were discussed with company representatives.

The effects of relaxing the above assumption are discussed in Chapter XIX (so far as the initial year is concerned) and on page 110–11 and in Chapter XXII, section C (for *future* exports).

While of course conceding that the model employed has no unique validity, experience with doing the research did not lead us to want to change the underlying assumptions, which are both realistic and analytically workable while at the same time remarkably simple.

## B. Effects on the Balance of Payments

These are divided into two main categories:

(a) *Initial Effects* in the year when the overseas investment is done – mainly additional exports of machinery, and financial transactions on capital account.

(b) *Continuing Effects* in the subsequent years, when the new overseas assets are in operation – mainly profits and changed exports of goods and services.

The continuing effects have to be shown as an average for all subsequent years (see page 88 and Chapter XVII).

### Initial Effects

The most reliable estimate relates to the overseas subsidiaries of all manufacturing companies taken together, and is that an increase of £100 in their net operating assets causes an increase in U.K. exports of £11; an increase of £100 in the U.K. group's stake in these subsidiaries, if accompanied by an increase of £67 in funds provided from elsewhere (the average experience in 1955–64), causes an increase of £18 in U.K. exports (pages 89–92 and Chapter XVIII, section A).

The addition of the above £100 to net operating assets entails, on our basic assumptions, that the country's net overseas obligations (including those of the subsidiaries) will be higher by £89 than they otherwise would have been (page 92). In the case where £100 is added to U.K. stake and the subsidiaries raise an extra £67 elsewhere, there would be an addition to general obligations of £82 on top of the £67 owed by the subsidiaries (page 234 ).

The effects on exports for individual industries are given in Tables XIV.1 and XVIII.1 (pages 374 and 236) on a basis which somewhat overstates the answer (because a technical correction cannot be made), and corresponding figures for individual countries are given in Tables XVI.1 and XVI.4 (pages 216 and 219). All the tables show great diversity, and it is most unlikely that the pattern would be changed if the corrections could be applied.

Capital equipment purchases by our sample – if grossed up to cover other subsidiaries in the same field, but *not* oil companies or subsidiaries in fields which we did not cover at all – amounted to some 3 to 4 per cent of U.K. exports of machinery (page 61, with adjustment to cover plantations).

### Profits in Companies' Books

The average rate of profit – after depreciation – shown by the sample on net operating assets (i.e. the capital employed in overseas businesses whether or not wholly owned by U.K. parents) came to 14½ per cent before overseas tax and 8 per cent after it (Table IV.1 on page 355 and Table XI.1 on page 361). The rate of return (including undistributed profits) on the U.K. stake – the part of the overseas businesses financed by the U.K. parent – averaged 8½ per cent after overseas tax (Table IV.2 on page 356). Tables IV.1 and IV.2 illustrate the wide differences in profitability between industries, Tables IV.5 and IV.7 do the same job for countries and for 'kinds of overseas business', and Table IV.3 shows that there was little trend in the year-to-year figures.

The rates of profit quoted are all taken from companies' normal accounting records; in the next section we consider the various adjustments that were carried out to bring the figures to an economically more meaningful basis.

## Adjustments to Book Profits

Conventional book figures for profitability fall short in a number of ways of being an economically meaningful measure of the rate of return to the nation on overseas investment, and in the course of the reports various adjustments are carried out.

Changing Value of Money. In a period of steadily rising prices normal profitability calculations exaggerate 'true' profitability, since (a) assets will tend to be valued in companies' books at too low a figure, (b) depreciation will therefore tend to be too low so that profits after depreciation are too high, and (c) profits will contain an element of 'inventory profit' (pages 272–5). Rapid inflation in Argentina and Brazil posed special problems and Appendix D describes our efforts at solving them.

For the subsidiaries of manufacturing companies the effect of adjustments made for these items on the nine-year averages are as follows:-

| | Calculated from book values<br>% | Adjusted<br>% |
|---|---|---|
| Profit on net operating assets – before overseas tax | 14.3 | 11.1 |
| Profit on net operating assets – after overseas tax | 7.7 | 5.3 |
| Profit on U.K. stake – after overseas tax | 8.1 | 5.5 |

Stock Exchange Valuations. For many purposes it is relevant to add capital appreciation of the U.K. stake – i.e. the growth in the market value of the parent's shares etc. *less* the amount of new capital supplied (including undistributed profits) – to the figures for profits. Stock exchange valuations of parent companies' interests overseas were prepared for the beginning and end years of the period; the excess of market value over book value of net assets grew from 19 per cent in 1955 to 36 per cent in 1964 (pages 55–6). The addition of capital appreciation to profits would thus raise the U.K. group's return from the traditionally calculated 8½ per cent to 12 per cent (Table V.4 on page 363).

The 'Notional Financing Charge'. As explained above, an addition to the net operating assets abroad under British control leads in our model to the incurring of additional net external obligations to the extent that the investment does not take the form of additional U.K. exports of capital goods etc. to equip the overseas operations. These financial obligations will in part be incurred directly by the investing company raising overseas finance for its business, and partly by the nation as a whole needing to increase sterling balances, borrow more from the I.M.F., run down overseas portfolio holdings, etc. (pages 275–8). In order to determine the profitability to the nation of overseas investment the interest payable on this additional external debt must be set against the profits earned. Although it is impossible to say precisely what the appropriate rate of interest to employ is, such research as we have done suggests that about 5 per cent would be a minimum figure (Chapter XXI, section E). If however one is to set the notional financing charge against a 'true' profit rate, which has been adjusted for changes in the value of money, then this rate should also be reduced, and the figure which we use for our main assessment is 3 per cent (pages 277–8).

## Continuing Effects on Exports

Subsidiaries' purchases of *current input items* represented just over 3 per cent of the sales value of goods produced locally, or about £4½ per £100 of net operating assets (pages 63–5 and Table VI.2 on page 365). There was no tendency, at least in total, for the proportion of U.K. input in local output to fall over time, possibly as a result of the continual starting of new factories or new product-lines (pages 65–9 and Table VI.3 on page 366).

Purchases from the U.K. of *finished goods for re-sale* amounted to about 6 per cent of subsidiaries' total sales; over the period of the study, however, the relative importance of this re-sale business within total sales declined quite markedly (pages 69–73).

As far as the *effects* of U.K. ownership of the subsidiaries on these continuing flows of exports are concerned, we concluded that the effect on input items was certain to be upward, as the non-U.K. controlled enterprise in the alternative position would have used less British components, semi-manufactures, etc.; for finished goods, on the other hand, the effect was normally negative, reflecting the fact that a company could normally export more of its products to a market if it had not established local production there, in spite of the presence of the substitute producer. The latter statement cannot be regarded as a general rule; it is extremely likely to be true in the case of companies that make consumer goods, especially those with well-known brand names, but there are cases where local production seemed fairly definitely to have had an upward effect on parent companies' exports of finished products (pages 103–7).

Taking the two kinds of purchases together, the average effect comes out at a small positive figure of about £1 per £100 of net operating assets (page 106) – a positive figure of £3½ per £100 on input items being enough to overcome a negative effect of £2½ per £100 on finished goods. As usual, there is considerable diversity between industries: for most of them the effect is extremely small, but in two or three cases there is a sizeable upward effect (Table XII.1, page 371) Analysis by country suggests that the more highly developed the country in which the investment is carried out the more likely is an adverse effect on U.K. exports (pages 108–10, pages 215–17 and Table XVI.1).

These findings were based on judgments made by the research team after discussions with the companies concerned. Two additional approaches to the problem of estimating effects on exports were tried, which led to little in the way of positive conclusions, but the findings of which were entirely consistent with those described above (Chapter XXII, sections A and B).

The impact of overseas production on exports depends crucially on the assumption adopted about the 'alternative position'. If the rigid assumption about an alternative producer stepping in to take the place of the U.K. company is relaxed to the extent of assuming '90 per cent replacement production' instead of '100 per cent replacement production' the effect on exports changes from a small positive effect to approximately zero (pages 110–11). This point is strongly reinforced by the results of a study carried out in the U.S.A. by Hufbauer and Adler (Chapter XXII, section C), who arrive at answers remarkably similar to ours on assumptions corresponding to those of our model, and at much less favourable ones with alternative assumptions.

To establish the total effect of direct investment on U.K. exports it is also necessary to estimate the effect of overseas production by U.K. subsidiaries on the demand for British *services*. Both conceptual and practical considerations dissuaded us from attempting a full survey of actual purchases of U.K. services (pages 279–81), and we therefore concentrated on 'effects'. After considering freights, management fees, licenses, and certain other services, we concluded that there was on average a favourable effect on U.K. exports of services amounting to some £½ per £100 of net operating assets (pages 111–14 and page 373).

The total continuing effect on exports of goods and services thus comes to about £1½ per £100 of net operating assets.

## U.K. Imports

We found virtually no trace in our research of imports into the U.K. of manufactured goods produced by overseas subsidiaries, although the report by Hufbauer and Adler revealed this as fairly important for U.S. subsidiaries; the reasons are discussed on page 298.

By far the greater part of the materials produced by companies in our sample was sold on the general market rather than to the U.K. parent – though the U.K. may have been the ultimate destination of a further substantial amount (pages 75–8). Even intra-group transactions were generally at arm's-length prices, and the terms of sales outside the group did not normally discriminate between U.K. buyers and others (pages 116–18).

Thus, while a few companies certainly enjoyed non-quantifiable benefits as a result of investment in materials production, the effect on the cost of U.K. imports was virtually zero. The gain to the U.K. was essentially confined to the profits earned.

## Drawing Together the Balance of Payments Effects

We can now present a summary picture of the effects on the balance of payments of adding £100 to the net operating assets of overseas subsidiaries of manufacturing companies. Attention is however drawn to the explanations given in the passages referred to in connection with the individual items, and also on pages 125–6.

In the year in which the investment takes place, the current account of the balance of payments will benefit by £11 of additional exports, and the capital account will be affected by an addition of £100 of net operating assets overseas and of £89 to net external financial obligations. (These capital account figures are of course comparisons with the alternative position: it might be, for example, that external financial obligations will *fall* in the year, but if so the fall will be £89 less than it would have been.)

On the average of subsequent years the effects – again relatively to the alternative position – are set out on page 278 as follows:-

| | | |
|---|---|---|
| (a) | Profits earned (after deduction of overseas taxes and after allowing for stock appreciation) on the £100 of additional net operating assets | about £5¼ |
| (b) | *Subtract* the external financing charge on £89 of additional external obligations at 3 per cent p.a. (see pages 343–4 above) | about £2¾ |
| (c) | *Add* additional exports of goods and services, plus the reduction in U.K. imports resulting from the fact that U.K. production is rather lower | about £1½ |

The total effect is thus a continuing annual gain of about £4 per £100 added to net operating assets; the 'trade' effect included as (c) would however become very small if one changed the basic assumption about what would happen to production overseas to '90 per cent substitution' (see above), and the total gain would fall to £2½.

The corresponding figures for the effects of adding £100 to U.K. stake (and simultaneously raising £67 overseas) are as follows:-

| | | |
|---|---|---|
| (a) | Post-tax return on £100 of U.K. stake | about £5½ |
| (b) | External financing charge on £82 of 'national' external obligations | about £2 |
| (c) | Trade effects | about £2 to £2½ |
| | Total, in round figures | £6 |

On the assumption of '90 per cent substitution' mentioned above, the trade effects would almost disappear, and the total would fall to £4.

## Timing Effects and Restrictions on Overseas Investment

The emphasis of our research was on long-run effects. The last section shows however that the short-run consequences of introducing a restriction on overseas investment are to ease the country's overseas financing problem. The conflict between long-term gain and short-run easing may be set out as follows:-

(i) An average act of direct investment overseas will strengthen the future balance of payments on current account – even after deducting the interest payable on the overseas borrowing (or the equivalent) by which, at least, from the national point of view, such an act of investment is almost wholly financed.

(ii) In consequence, a steady rate of direct investment overseas would, if maintained long enough, provide enough of an annual surplus on current account to finance the annual quota of new investment – even though that surplus is calculated after deducting the financing charge.

(iii) Nevertheless each single act of direct investment overseas has an immediate effect on the balance of payments (capital and current account together) which is far larger than one year's 'continuing' benefit, so that a restriction of the out-flow brings a 'cash' or 'financing' benefit for a substantial number of years.

A formal reconciliation of the apparent advantage of continued investment under (i) with the advantage of restriction under (iii) may then be secured by saying that, in times of crisis, the notional financing charge used in (i) is not adequate to represent the true cost to the nation, because the loss of reserves caused by the overseas investment leads us at such times to pursue deflationary policies which reduce the national income.

In Chapter XVIII, section B, this set of issues is put into quantitative terms for an illustrative case of a restriction on additions to net operating assets overseas of £100 million a year, on the alternative assumptions (a) that the companies would have supplied all the finance from the U.K., and (b) that they would have raised 40 per cent overseas. (Figures for other assumptions can easily be calculated.)

These figures show that the restriction policy would ease the country's external financing problem to the following extent, in £ million :

| | With 100 per cent U.K. finance | With 40 per cent Overseas finance |
|---|---|---|
| 1st year | 89 | 49 |
| 2nd year | 85 | 45 |
| 3rd year | 81 | 41 |
| 4th year | 76 | 36 |
| etc. | | |

A higher proportion of overseas financing by the companies should however be possible, at least for a period (page 242).

### Policy Issues

Policy issues are outside the scope of our reports, but in the interests of avoiding misunderstanding the relevance of our analysis is indicated briefly on page 131. In particular, the point is made that the choice of policy measures to adopt can only be made after a full review of the alternative possibilities. The question of selectivity in any restrictions which might be introduced is further discussed in Chapter XVIII, section C.

### Disinvestment

The effects of selling part of the overseas assets under U.K. control (discussed in Chapter XVIII, section D) are almost the mirror image of those for positive investment. The two main differences are, first, the absence of anything analogous to the initial effect on exports of capital equipment and, second, the need to relate continuing effects to the market value of net assets (what they could be sold for) rather than their book value (broadly speaking, what they cost (pages 244– 6).

On a broad view it seems clear that the effects on the balance of payments of 'not disinvesting' at the outset of our period (1955) – in the shape of profits and additional exports – exceeded by a comfortable margin the income which would have been secured from using the proceeds to buy financial assets (pages 246–8).

## C. Effects on the National Economy

Our reports dealt first with the effects of overseas investment on the balance of payments, largely because this was given priority in the terms of reference. In themselves, however, these effects do not provide the most fundamental test of whether overseas investment is 'good' or 'bad': apart from anything else a tendency to strengthen the balance of payments is only 'good' if there is a general tendency for the balance of payments to be weak, and may be positively embarrassing to a country with a chronic surplus (page 301).

Our primary concern is with the effect on the U.K. national income (which might of course be influenced by the need to pursue a deflationary policy to make overseas investment possible); we have a secondary interest in the effects on other objectives, such as giving help to less developed countries (page 302).

### Income from Capital

Our research showed that, over the field which we covered, capital invested overseas yielded a higher contribution to the U.K. national income than it would have done if it had not been so invested.

This apparently simple sentence covers a lot of problems about the basis of comparison which are discussed in Chapter XXIII, section A. Some of the main points about the comparison are :-

(a) Out of every £100 invested overseas we have seen above that £89 is in fact raised overseas in one way or another. For this part we want to compare the 'true' post-tax profits earned overseas on £89 with the adjusted financing charge of 3 per cent per annum, also on £89.

(b) The remaining £11 is 'matched' by an equal reduction in the stock of capital assets in the U.K. (in comparison with what they would have been). A somewhat neglected finding in our Interim Report is that these assets should be thought of as being in the non-industrial field (pages 93–5), and their 'true' yield should be assessed accordingly.

(c) For this second part of the field, the proper basis of comparison is between overseas profits less overseas tax, on the one hand, and home profits, before tax, on the other. (In principle a deduction should be made from home profits for government expenditure caused by the presence of extra capital in the country, and payable out of taxes levied on its profits, but we concluded that this would be nil or even negative. There is no case for deducting any U.K. tax on home profits, which is part of the national income.)

(d) In view of the small weight to be attached to the capital effectively provided by the U.K., and the fact that we want a 'true' return (adjusted for changes in the value of money) on a non-industrial use, we took 3 per cent as the best round figure to apply as yardstick to all capital used in the 'alternative position' (page 336).

## Other Direct Effects on National Income

Overseas investment may affect the real income which accrues to other British factors of production, including other units of capital. The possibilities are reviewed in Chapter XXIII, section B.

We found that the net effects derived from changes in the scale of U.K. production were likely to be negligible, because the net changes were so small.

On the other hand the effect of overseas investment is to make many U.K. companies (or groups of companies) much bigger, because they add overseas subsidiaries to a U.K. base which is on average much the same size. (See Chapter XV, which reconciles the two facts that U.K. exports are little affected, but sales overseas by U.K. companies (and their subsidiaries) are much increased. Table XV.2 on page 213 gives figures for the effect of adding £100 million of net operating assets overseas.)

This provides scope for an improvement in real productivity through the more widespread and effective use of research results, and also through the passing round of informal knowledge and experience between parent and subsidiaries.

## Gain through Knowledge-sharing

The logical and statistical problems involved in assessing this are discussed in Chapter XXIV, and only the merest outline is given here: so far as we know, the problem has never been tackled before.

As always, we are concerned with the gain from having one more subsidiary, rather than comparing (say) Unilever as it is with an alternative position in which it had no overseas subsidiaries. The gain on this 'less or more' basis is then related to the assets of the subsidiary, and the results averaged over all subsidiaries (page 310).

We were primarily concerned to measure for each company the gain *which had not already been included in the profits of the oversea subsidiary*, since we wanted to add this to those profits to measure the total return. We did however also attempt a global estimate of the 'true' gain from knowledge-sharing(pages 326–31).

The basic elements in the gain from having an extra subsidiary are :-

(a) The rest of the group gets its own research cheaper, because it is able to charge part of the cost to the new subsidiary (but we must not include in this charge any payment for additional research done specially for this subsidiary and – more important – we must deduct any loss of licence revenue which might otherwise have been secured from independent producers in that country).

(b) The group gets the benefit of research done by the new subsidiary, which we value at the (full) cost of that part of its research which is not 'of local interest only', in return for a payment equal to part of that cost.

(c) There is a gain to the group from informal know-how derived in the new subsidiary.

The statistical methods which we adopted aimed consistently at avoiding the risks of making any under-estimate. The actual working of the calculation is set out on pages 315–16.

## Profits and Knowledge-sharing

Detailed statistical results about knowledge-sharing are given in Chapter XXV, with analyses by industry, country and statistical item; they also show the relationship between overseas profits and the gain from knowledge-sharing.

The most important results are given in Chapter XXVI, which attempts an over-all picture of the role of overseas investment, notably in Tables XXVI.1, on page 335, which covers the whole sample, and in Table XXVI.2, on page 336, which applies to subsidiaries of manufacturing companies only. The latter is reproduced here, (see next page), as it is only for manufacturing that the results can be adjusted for changes in the value of money.

In round figures – and certainly nothing more is justified – the total 'true' return to the U.K. from these subsidiaries was 6 per cent a year, against an opportunity cost of 3 per cent a year. (This does not however take account of any indirect effects on the national income arising through the balance of payments, discussed below.)

The 'true' gain from knowledge-sharing – which is all included in the total return – amounts to about 30 per cent of the total, and this proportion strongly suggests that much direct investment overseas would not appear attractive to the parent

Returns from Overseas Subsidiaries of Manufacturing Groups

| Item | % of net operating assets[a] | % of U.K. stake[a] |
|---|---|---|
| Post-tax profits, adjusted[a] | 5.3 | 5.5 |
| 'Additional' gain from knowledge-sharing[b] | 0.7 | 0.9 |
| Total return | 6.0 | 6.4 |
| Estimated 'true' gain from knowledge-sharing[c] | 1.7 | 2.2 |

For notes, see page 336.

company if it did not provide a means of extending the use of existing knowledge at little or no additional cost.

### National Income and the Balance of Payments

We feel that it is unwise to try to summarise the one-page discussion of this in Chapter XXVI, section C, and suggest that this important section be read in full.

### International Relations

Essentially our analysis has been directed to the effects of overseas investment on the U.K., and in particular we have assessed its benefits in terms of profits after overseas tax.

The tax revenue payable to the host government took an average of 46 per cent of the subsidiaries' profits, with wide variations (pages 218–20 and Table XVI.2).

The U.K. derives an indirect benefit from this 'lost' revenue which can be seen most clearly by considering countries at the two extremes of development. For *under-developed* countries, it contributes to our secondary objective of helping with their development (which may also benefit in other ways through our overseas investment). For *technically developed* countries this loss has to be seen as the counterpart of a corresponding gain in revenue on the (very productive) investments which they have made in the U.K. – the double-tax agreement must be considered as a whole (pages 338–9).

## D. **Miscellaneous Findings**

Various findings of the research which are of interest, but which do not fit naturally into the main scheme of this summary, are listed here briefly with the page references.

Profitability and Growth. There was no correlation – positive or negative – between profitability and *growth* of assets, either on an industry basis (Table IV.4, page 356) or by country (Table IV.6, page 358). See also pages 41–6.

Profitability and Size. There was no more than a faint (and not significant) correlation between profitability and the *size* of companies' overseas assets (Table IV.8, page 359).

Profitability and Age of Investment. There was no connection between profitability and the *age* of a subsidiary, as measured by the proportion of its assets added during the period under review (Table XVII.8), except that profitability was extremely low in the early years of completely new ventures (Tables XVII.2 and 3, page 225).

Effects of Overseas Taxation. Overseas tax-rates vary greatly. On average, U.K. companies operating in high-tax countries earned higher pre-tax profits than those in low-tax countries, but this only half-compensated them for the higher taxes, so that post-tax profits were – again on average – significantly lower (pages 218–20).

# Appendix H

# Tables from the Interim Report—Revised Version

In the following pages we reproduce, under the original numbering, all tables appearing in the text of the Interim Report, with the exception of those relating solely to the oil companies. Tables in the Appendices of the Interim Report are not reproduced.

The tables in Appendix H have been revised wherever necessary to take account of (i) the more complete returns now available, including those for Plantations; (ii) amendments to the original data; (iii) the few computing errors and misprints in the original tables and (iv) the very occasional modifications in procedure adopted for the Final Report. Brief notes (headed 'Commentary') have been added in the handful of cases where the conclusions of the Interim Report needed significant amendment, and/or where significant changes occurred in the results.

Minor changes have not been noted; readers with special interests are warned that the introduction of new information necessitated frequent changes in the figures for Malaysia and India, which now incorporate 'rubber' and 'tea' plantations respectively, and for Mining and Chemicals, to which new companies have been added. None of these changes, however, seemed to be of the type that need special comment.

## General Notes

The following notes apply in general to the tables:

(1) Where industry detail is given, manufacturing industries have been grouped together, and a separate sub-total has been added for them.

(2) Oil companies are excluded, except where they are stated to be included.

(3) 'Food, drink, tobacco, etc.' is an abbreviation for 'Food, drink, tobacco and household products'; 'Building materials, etc.' is an abbreviation for 'Building materials and other miscellaneous manufacturing'.

(4) The term 'subsidiaries' means 'overseas branches, subsidiaries and sub-subsidiaries of U.K. groups'.

(5) Where figures are given for the *growth* of net operating assets, these have been adjusted to exclude the effect of revaluations (some £35 million, 1955-64, for the sample as a whole).

Table I.1. Direct private investment overseas 1960 to 1964 with some comparative figures

£ million

| Item | Average 1960–64 |
|---|---|
| 1. Direct investment abroad by U.K. companies of all kinds | 300 |
| 2. Net investment in U.K. by overseas companies | 180 |
| 3. Net investment in U.K. by home and overseas companies | 1,500 |
| 4. Total net investment in U.K. (public and private) | 3,150 |
| 5. Deficit on U.K. balance of payments (current account and long-term capital account together) | 250 |
| 6. Total of debit items on current and long-term capital accounts | 7,000 |
| 7. Income from direct investments | 420 |

*Notes*: The definition of item 1 is discussed on page 18.

Item 6 is as gross a figure as can be derived from official statistics.

Some figures are partly estimated; oil companies are included in all cases.

Table I.2. Relation of 'U.K. stake' to 'operating assets'

£ million

| Item | End-1955 | End-1964 | 9-year increase: Crude | 9-year increase: Adjusted for revaluations |
|---|---|---|---|---|
| Net operating assets | 1,074.2 | 2,141.3 | 1,067.0 | 1,031.9 |
| Trade investments | 20.4 | 105.6 | 85.2 | 85.2 |
| Total | 1,094.6 | 2,246.9 | 1,152.3 | 1,117.1 |
| U.K. group's 'stake' | 885.6 | 1,622.9 | 737.3 | 704.8[a] |
| Minority interests | 93.9 | 310.6 | 216.7 | 213.9 |
| Non-current liabilities | 114.9 | 313.4 | 198.3 | 198.3 |
| Total, excluding oil | 1,094.6 | 2,246.9 | 1,152.3 | 1,117.1 |

[a] Of which, undistributed profits: 403.8.

*Commentary*: The Interim Report's figure for undistributed profits of 339.6 was a misprint for 399.6.

Table IV.1. Net assets and pre-tax profits of overseas subsidiaries by industry
(Nine year averages: £ million)

| Industry | Net operating assets (1) | Trade investments (2) | Total net assets (3) | Pre-tax profits (after depreciation) (4) | Income from trade investments (5) | Total pre-tax income (6) | % Profitability | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | $\frac{(4)}{(1)}$ (7) | $\frac{(5)}{(2)}$ (8) | $\frac{(6)}{(3)}$ (9) |
| Building materials, etc. | 66.1 | 1.8 | 68.0 | 15.1 | 0.1 | 15.2 | 22.9 | 5.8 | 22.4 |
| Food, drink, tobacco, etc. | 514.4 | 3.3 | 517.7 | 84.9 | 0.5 | 85.3 | 16.5 | 13.9 | 16.5 |
| Chemicals | 171.9 | 15.0 | 186.9 | 23.2 | 1.6 | 24.8 | 13.5 | 10.7 | 13.3 |
| Textiles | 87.3 | 0.3 | 87.7 | 11.6 | 0 | 11.6 | 13.3 | 9.3 | 13.3 |
| Metals & metal products | 169.8 | 9.9 | 179.7 | 21.8 | 0.4 | 22.2 | 12.9 | 4.0 | 12.4 |
| Non-electrical engineering | 21.2 | 0.1 | 21.3 | 2.5 | 0 | 2.5 | 11.6 | 6.3 | 11.6 |
| Electrical engineering | 60.7 | 0.6 | 61.3 | 6.7 | 0 | 6.8 | 11.1 | 4.8 | 11.0 |
| Vehicles & components | 114.1 | 1.8 | 116.0 | 12.4 | 0.2 | 12.5 | 10.9 | 8.2 | 10.8 |
| Paper | 137.7 | 3.3 | 141.0 | 13.9 | 0.2 | 14.1 | 10.1 | 6.4 | 10.0 |
| Total manufacturing | 1,343.2 | 36.3 | 1,379.5 | 192.1 | 3.0 | 195.1 | 14.3 | 8.3 | 14.1 |
| Mining | 116.5 | 24.1 | 140.6 | 22.4 | 1.5 | 24.0 | 19.3 | 6.4 | 17.0 |
| Plantations | 95.3 | 1.2 | 96.5 | 14.8 | 0.1 | 14.9 | 15.5 | 11.5 | 15.5 |
| Total | 1,555.0 | 61.7 | 1,616.6 | 229.3 | 4.7 | 234.0 | 14.7 | 7.6 | 14.5 |

*Notes*: (1), (2), (3), are annual averages 1955 – 63; (4), (5), (6), are annual averages 1956 – 64.
Manufacturing industries are arranged in descending order of profitability, as measured in column (7).

Table IV.2. Interest of U.K. reporting group in net assets and post-tax profits, by industry

(Nine year averages: £ million)

| Industry | U.K. group's stake (1) | Post-tax profits attributable to U.K. group (2) | % Profitability (after overseas tax) (2) ÷ (1) |
|---|---|---|---|
| Building materials | 57.2 | 7.8 | 13.7 |
| Food, drink, tobacco, etc. | 447.2 | 39.2 | 8.8 |
| Chemicals | 128.2 | 10.7 | 8.4 |
| Paper | 69.2 | 5.3 | 7.7 |
| Textiles | 77.6 | 6.0 | 7.7 |
| Metals & metal products | 96.5 | 7.1 | 7.4 |
| Electrical engineering | 48.7 | 2.6 | 5.4 |
| Vehicles & components | 90.1 | 4.5 | 5.0 |
| Non-electrical engineering | 18.0 | 0.8 | 4.5 |
| Total manufacturing | 1032.8 | 84.1 | 8.1 |
| Mining | 89.3 | 12.8 | 14.4 |
| Plantations | 92.7 | 8.9 | 9.6 |
| Total, excluding oil | 1,214.8 | 105.9 | 8.7 |
| Oil | 918.9 | 119.7 | 13.0 |

*Notes*: (1) annual average of the (end years) 1955–63 for the general sample, and of the mid-years 1956–64 for the oil companies.

(2) annual average 1956–64.
The oil figures are not completely comparable with those for the general sample.

Table IV.4. Growth of net operating assets, and profitability, by industry

| Industry | 9-Year addition to net operating assets | | Average pre-tax profitability, 1956–64 % |
|---|---|---|---|
| | 1964 less 1955 £ million | as % of 1955 | |
| Building materials, etc. | 49.0 | 120.3 | 22.9 |
| Food, drink, tobacco, etc. | 197.0 | 48.2 | 16.5 |
| Chemicals | 128.2 | 108.1 | 13.5 |
| Textiles | 37.1 | 53.0 | 13.3 |
| Metals & metal products | 174.4 | 230.4 | 12.9 |
| Non-electrical engineering | 11.0 | 79.3 | 11.6 |
| Electrical engineering | 44.2 | 90.3 | 11.1 |
| Vehicles & components | 90.4 | 120.0 | 10.9 |
| Paper | 124.2 | 182.5 | 10.1 |
| Total manufacturing | 855.5 | 93.0 | 14.3 |
| Mining | 154.3 | 227.2 | 19.3 |
| Plantations | 22.1 | 25.5 | 15.5 |
| Total | 1031.9 | 96.1 | 14.7 |

Table IV.3. Net assets, profits and profitability of overseas subsidiaries of all U.K. reporting groups: individual years and annual average

(£ million)

| | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | Annual average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *U.K. mining, plantations and manufacturing groups* | | | | | | | | | | | | |
| Pre-tax profits | 174.4 | 189.9 | 183.7 | 182.2 | 200.7 | 238.1 | 240.9 | 249.2 | 285.2 | 322.8 | – | 229.3 |
| Net operating assets | – | 1,074.0 | 1,205.3 | 1,327.3 | 1,464.2 | 1,539.6 | 1,694.6 | 1,806.9 | 1,882.9 | 1,999.7 | 2,141.2 | 1,555.0 |
| Pre-tax profitability % | – | *17.7* | *15.2* | *13.7* | *13.7* | *15.5* | *14.2* | *13.8* | *15.1* | *16.1* | – | *14.7* |
| Post-tax profits to U.K. group | 89.2 | 96.0 | 91.3 | 84.7 | 94.1 | 113.4 | 116.8 | 113.1 | 125.0 | 147.0 | – | 105.9 |
| U.K. group's stake | – | 885.5 | 962.5 | 1,057.0 | 1,139.9 | 1,205.5 | 1,309.6 | 1,384.3 | 1,452.7 | 1,536.1 | 1,622.9 | 1,214.8 |
| Post-tax profitability % | – | *10.8* | *9.5* | *8.0* | *8.3* | *9.4* | *8.9* | *8.2* | *8.6* | *9.6* | – | *8.7* |
| *Oil companies* | | | | | | | | | | | | |
| Post-tax profits to U.K. group | – | 133.8 | 136.7 | 101.1 | 102.2 | 97.5 | 97.3 | 123.6 | 144.9 | 140.6 | – | 119.7 |
| U.K. group's stake | – | 571.9 | 662.1 | 737.5 | 840.0 | 922.6 | 1,002.4 | 1,088.5 | 1,169.7 | 1,275.3 | – | 918.9 |
| Post-tax profitability % | – | *23.4* | *20.6* | *13.7* | *12.2* | *10.6* | *9.7* | *11.4* | *12.4* | *11.0* | – | *13.0* |

*Notes*: Assets of oil companies for individual years are averages of the beginning and end of the year shown. Assets of mining and manufacturing groups for individual years are as of the *beginning* of the year shown.

Figures for oil companies include overseas trade investments held directly by the U.K. parent companies, as well as those held by their overseas subsidiaries.

Table IV.5. Net assets and profitability, by country
(Annual averages)

| Country | Net operating assets (£ million) | Pre-tax profitability (%) | U.K. stake (£ million) | Post-tax profitability to U.K. group (%) |
|---|---|---|---|---|
| Germany | 29.5 | 47.8 | 27.8 | 22.8 |
| Malaysia | 54.6 | 28.6 | 50.8 | 19.8 |
| Italy | 8.2 | 26.9 | 6.0 | 12.3 |
| Ghana | 24.9 | 26.0 | 24.1 | 13.4 |
| India | 155.9 | 17.5 | 132.4 | 7.7 |
| Brazil | 27.4 | 16.8 | 24.0 | 5.3 |
| South Africa | 97.5 | 14.3 | 97.0 | 10.5 |
| Australia | 201.5 | 14.3 | 156.4 | 8.0 |
| U.S.A. | 283.6 | 13.6 | 211.8 | 8.6 |
| Jamaica | 8.3 | 11.9 | 5.2 | 8.4 |
| Canada | 294.8 | 8.8 | 171.4 | 5.5 |
| Nigeria | 51.2 | 7.6 | 49.5 | 4.7 |
| Argentina | 14.8 | 7.4 | 14.0 | 1.6 |
| France | 23.3 | 7.4 | 14.5 | 1.9 |
| Denmark | 5.5 | 6.5 | 4.4 | 5.3 |
| Total, fifteen countries | 1,281.0 | 14.5 | 989.3 | 8.7 |
| Rest of world | 274.0 | 15.8 | 225.6 | 9.0 |
| World | 1,555.0 | 14.7 | 1,214.8 | 8.7 |

Table IV.6. Growth of net operating assets, by country, of reporting U.K. groups, compared with their size in 1955, average profitability, and the national income of the countries. (Manufacturing groups only)

| Country | 9-Year addition to net operating assets 1964 less 1955 (£ million) | (1) as % of net operating assets, 1955 | (1) as % of country's national income in 1960 | Average pre-tax profitability 1956 to 1964 (%) |
|---|---|---|---|---|
| Germany | 44.8 | 302.1 | 0.23 | 47.8 |
| Malaysia | 13.5 | 113.8 | 2.50 | 28.7 |
| Italy | 8.0 | 162.9 | 0.09 | 26.9 |
| India | 70.8 | 114.2 | 0.67 | 21.2 |
| Brazil | 8.9 | 43.2 | 0.27 | 16.8 |
| Ghana | −0.1 | −0.8 | −0.03 | 16.1 |
| South Africa | 35.1 | 43.7 | 1.62 | 14.6 |
| U.S.A. | 103.4 | 57.7 | 0.07 | 14.3 |
| Australia | 172.2 | 179.2 | 3.94 | 13.8 |
| Jamaica | 7.0 | 115.9 | 3.43 | 11.9 |
| Canada | 207.1 | 136.6 | 2.11 | 8.8 |
| Argentina | 14.5 | 136.5 | 0.35 | 7.6 |
| France | 16.6 | 104.3 | 0.10 | 7.1 |
| Nigeria | 14.5 | 44.7 | 1.41 | 6.9 |
| Denmark | 6.3 | 218.2 | 0.37 | 6.5 |
| Total, fifteen countries | 722.6 | 102.3 | 0.32 | 14.1 |

*Source* for National Income figures: United Nations *Statistical Yearbook*, 1964.

Table IV.7. Net assets and profitability of subsidiaries of manufacturing companies – by type of overseas activity: fifteen specified countries (Annual averages: £ million)

| Type of overseas activity | Net operating assets (1) | Pre-tax profitability (% of (1)) (2) | U.K. group's stake (3) | Post-tax profitability to U.K. group (% of (3)) (4) |
|---|---|---|---|---|
| 1. Materials producers | | | | |
| (a) for U.K. group's use | 25.3 | 10.1 | 9.6 | 11.1 |
| (b) for general market | 9.8 | 11.9 | 7.2 | 6.5 |
| 2. Manufacturing | 766.4 | 16.0 | 573.4 | 9.1 |
| 3. Selling | 12.1 | 7.5 | 12.3 | 4.2 |
| 4. Mixed | 260.8 | 9.2 | 208.7 | 5.6 |
| Total (all subsidiaries of manufacturing companies) | 1074.6 | 14.1 | 811.3 | 8.1 |

*Note*: For definitions of types of overseas activity, see page 47.

Table IV.8. Analysis of manufacturing companies by profitability of their overseas subsidiaries (Annual averages)

| Pre-tax profitability (%) | Number of companies (1) | Net operating assets (£ million) (2) | Pre-tax profits (£ million) (3) | (3) as % of (2) (4) | Effect on U.K. exports (£ million) (5) | (5) as % of (2) (6) |
|---|---|---|---|---|---|---|
| Loss | 1 | 1.1 | –0.1 | –12.9 | 0.1 | 5.4 |
| 0 to 5 | 5 | 71.7 | 2.9 | 4.1 | 3.5 | 5.2 |
| 5 to 10 | 12 | 241.4 | 20.3 | 8.4 | 2.5 | 1.1 |
| 10 to 15 | 12 | 267.9 | 31.9 | 11.9 | 9.1 | 3.4 |
| 15 to 20 | 9 | 401.0 | 74.0 | 18.5 | 0 | 0 |
| 20 and over | 9 | 91.5 | 22.3 | 24.4 | –4.1 | –4.5 |
| Total | 48 | 1074.5 | 151.3 | 14.1 | 11.1 | 1.0 |

*Commentary*: This table has been extended to incorporate the effect of overseas production on U.K. exports of non-capital goods (columns (5) and (6)), and the figures therefore relate only to the fifteen specified countries.

The rank correlation coefficient between size (column (2)) and pre-tax profitability (column (4)) for the 48 companies is barely changed at +0.19 while that between pre-tax profitability and effect on exports (column (6)) is –0.25, which implies only a rather weak negative association.

Table IV.9. Royalties and management fees to reporting U.K. groups, by industry (Annual averages)

| Industry | Royalties and management fees, after overseas tax (1) (£ million) | (1) as % of post-tax profitability to U.K. group | (1) as % of U.K. stake |
|---|---|---|---|
| Electrical engineering | 0.79 | 30.3 | 1.63 |
| Food, drink, tobacco, etc. | 4.84 | 12.4 | 1.08 |
| Vehicles & components | 0.97 | 21.4 | 1.08 |
| Textiles | 0.83 | 13.9 | 1.07 |
| Chemicals | 1.02 | 9.5 | 0.79 |
| Non-electrical engineering | 0.10 | 11.8 | 0.54 |
| Metals & metal products | 0.22 | 3.1 | 0.23 |
| Paper | 0.09 | 1.7 | 0.13 |
| Building materials, etc. | 0.04 | 0.6 | 0.08 |
| Total manufacturing | 8.89 | 10.6 | 0.86 |
| Mining | 1.34 | 10.4 | 1.50 |
| Plantations | 0.32 | 3.6 | 0.35 |
| Total | 10.55 | 10.0 | 0.87 |

Table IV.10. Royalties and management fees to reporting U.K. groups, by country (Annual averages)

| Country | Royalties and management fees, after overseas tax (1) (£ million) | (1) as % of post-tax profitability to U.K. group | (1) as % of U.K. stake |
|---|---|---|---|
| Ghana | 1.00 | 30.9 | 4.13 |
| Denmark | 0.12 | 49.5 | 2.62 |
| Nigeria | 0.94 | 40.5 | 1.90 |
| Italy | 0.11 | 15.3 | 1.88 |
| Germany | 0.39 | 6.2 | 1.42 |
| Brazil | 0.29 | 23.1 | 1.22 |
| France | 0.17 | 62.4 | 1.18 |
| Malaysia | 0.53 | 5.2 | 1.04 |
| U.S.A. | 2.07 | 11.4 | 0.98 |
| Australia | 1.30 | 10.4 | 0.83 |
| South Africa | 0.52 | 5.1 | 0.54 |
| Jamaica | 0.03 | 6.1 | 0.51 |
| Argentina | 0.06 | 25.3 | 0.39 |
| India | 0.44 | 4.3 | 0.33 |
| Canada | 0.29 | 3.1 | 0.17 |
| Total, fifteen countries | 8.26 | 9.6 | 0.83 |
| Rest of world | 2.29 | 11.3 | 1.02 |
| World | 10.55 | 10.0 | 0.87 |

Table XI.1. Rates of return on U.K. stake and net operating assets (Annual average, 1956–64: %)

| Industry | Post-tax profitability on U.K. stake | Post-tax profitability on net operating assets | Combined return on U.K. stake (1) | Combined return on net operating assets (2) |
|---|---|---|---|---|
| Building materials, etc. | 13.7 | 13.8 | 19.4 | 18.7 |
| Chemicals | 8.4 | 7.7 | 18.0 | 14.9 |
| Textiles | 7.7 | 8.0 | 11.9 | 11.7 |
| Food, drink, tobacco, etc. | 8.8 | 8.5 | 10.6 | 10.1 |
| Metals & metal products | 7.4 | 6.8 | 8.6 | 7.5 |
| Vehicles & components | 5.0 | 5.3 | 8.5 | 8.0 |
| Paper | 7.7 | 6.2 | 7.5 | 6.1 |
| Electrical engineering | 5.4 | 5.6 | 7.4 | 7.2 |
| Non-electrical engineering | 4.5 | 5.3 | 4.1 | 4.8 |
| Total manufacturing | 8.1 | 7.7 | 11.3 | 10.1 |
| Mining | 14.4 | 12.3 | 26.5 | 21.6 |
| Plantations | 9.6 | 9.3 | 7.9 | 7.7 |
| Total | 8.7 | 8.0 | 12.1 | 10.8 |

*Notes*: (1) Combined return on U.K. stake – nine years' post-tax profits to the U.K. group *plus* capital appreciation on U.K. stake, divided by nine, as per cent of average annual U.K. stake.

(2) Combined return on net operating assets – nine years' total post-tax profits *plus* capital appreciation on U.K. stake, divided by nine, as per cent of average annual net operating assets.

Table V.1. Fixed assets at book value and estimated replacement cost (£ million, net of depreciation: derived from subsidiaries of manufacturing companies only)

| | Companies giving figures for both 1955 and 1964 | | All companies giving figures for 1964 |
|---|---|---|---|
| Item | 1955 | 1964 | 1964 |
| (1) Book value of fixed assets | 191 | 432 | 622 |
| (2) Estimate based on replacement cost | 220 | 537 | 781 |
| Ratio of (2) to (1) as a % | 115 | 124 | 126 |
| Number of companies | 12 | 12 | 20 |

*Notes*: (1) The book value was in some cases raised between 1955 and 1964 by revaluations; trade investments of overseas subsidiaries are excluded.

Table V.2. Book value and market value[a] of U.K. group's stake, end-1955, by industry

| Industry | Book value (£ million) | Market value (£ million) | % Excess of market value over book value |
|---|---|---|---|
| Chemicals | 89.0 | 145.9 | 63.9 |
| Electrical engineering | 40.7 | 49.9 | 22.8 |
| Vehicles & components | 59.6 | 70.9 | 19.0 |
| Building materials, etc. | 35.1 | 41.0 | 17.8 |
| Metals & metal products | 55.0 | 59.2 | 7.8 |
| Food, drink, tobacco, etc. | 355.1 | 380.6 | 7.2 |
| Non-electrical engineering | 13.9 | 14.3 | 3.0 |
| Paper | 40.8 | 41.4 | 1.5 |
| Textiles | 61.1 | 60.0 | –1.8 |
| Total manufacturing | 750.2 | 863.3 | 15.1 |
| Mining | 52.8 | 106.9 | 102.4 |
| Plantations | 82.6 | 90.2 | 9.2 |
| Total | 885.6 | 1,060.4 | 19.7 |

[a] Based on stock exchange values.

Table V.3. Book value and market value[a] of U.K. group's stake, end-1964, by industry.

| Industry | Book value (£ million) | Market value (£ million) | % Excess of market value over book value |
|---|---|---|---|
| Chemicals | 194.5 | 364.0 | 87.2 |
| Building materials, etc. | 76.2 | 108.6 | 42.6 |
| Vehicles & components | 126.1 | 160.3 | 27.2 |
| Textiles | 94.1 | 117.5 | 24.9 |
| Food, drink, tobacco, etc. | 537.6 | 648.4 | 20.6 |
| Electrical engineering | 67.5 | 80.0 | 18.5 |
| Non-electrical engineering | 19.9 | 23.4 | 17.6 |
| Paper | 118.8 | 136.2 | 14.7 |
| Metals & metal products | 132.2 | 141.4 | 7.0 |
| Total manufacturing | 1,366.7 | 1,779.9 | 30.2 |
| Mining | 146.1 | 294.9 | 101.8 |
| Plantations | 110.1 | 101.0 | –8.3 |
| Total | 1,622.9 | 2,175.7 | 34.1 |

[a] Based on stock exchange values.

Table V.4. Capital appreciation, profits and 'combined return' to U.K. stake, by industry (£ million)

| Industry | U.K. group's stake, (annual average, 1955 – 63) | Additional capital invested (end-1955 to end-1964) (1) | Growth in market value (end-1955 to end-1964) | Capital appreciation (end-1955 to end-1964) (2) | Post-tax profits attributable to U.K. group (nine years, 1956 – 64) | Combined return (per cent per annum, 1956 – 64) (3) |
|---|---|---|---|---|---|---|
| Building materials, etc. | 57.2 | 38.2 | 67.6 | 29.3 | 70.4 | 19.4 |
| Chemicals | 128.2 | 107.4 | 218.1 | 110.7 | 96.6 | 18.0 |
| Textiles | 77.6 | 28.1 | 57.5 | 29.4 | 53.6 | 11.9 |
| Food, drink, tobacco, etc. | 447.2 | 192.0 | 267.9 | 75.9 | 352.7 | 10.6 |
| Metals & metal products | 96.5 | 71.5 | 82.2 | 10.6 | 64.0 | 8.6 |
| Vehicles & components | 90.1 | 61.2 | 89.4 | 28.2 | 40.8 | 8.5 |
| Paper | 69.2 | 96.2 | 94.8 | – 1.4 | 48.1 | 7.5 |
| Electrical engineering | 48.7 | 21.4 | 30.1 | 8.7 | 23.5 | 7.4 |
| Non-electrical engineering | 18.0 | 9.8 | 9.1 | – 0.8 | 7.4 | 4.1 |
| Total manufacturing | 1,032.8 | 625.9 | 916.5 | 290.7 | 757.1 | 11.3 |
| Mining | 89.3 | 90.8 | 188.0 | 97.2 | 115.6 | 26.5 |
| Plantations | 92.7 | 24.6 | 10.7 | –13.8 | 80.1 | 8.0 |
| Total | 1,214.8 | 741.3 | 1,115.3 | 374.0 | 952.8 | 12.1 |

*Notes*: (1) Additional capital invested – increments of share and loan capital supplied to subsidiaries, sub-subsidiaries and branches by the U.K. group, including all forms of loan and credit on long and short term account, *plus* retained profits of subsidiaries, etc. Amounts shown in the table do not necessarily correspond closely to the change in book value of U.K. stake during the same period (even after adjustment for revaluations). See Appendix A, p.136 and Appendix B, p.143.

(2) Capital appreciation – 'growth in market value' (end-1955 to end-1964) *less* 'additional capital invested' (including retained profits) during the same period.

(3) Combined return – 'capital appreciation' (end-1955 to end-1964) *plus* 'post-tax profits attributable to U.K. group' (nine years, 1956 – 64) divided by nine, as percentage of U.K. stake (annual average, 1955 – 63).

*Commentary*: We should emphasise in order to clear up any misunderstanding that retained profits of the subsidiaries, along with the remainder of 'additional capital invested', are deducted from 'growth in market value' before arriving at 'capital appreciation'. This has been our procedure throughout both reports.

Table VI.1. Purchases of capital equipment from the U.K. by subsidiaries in the 15 specified countries

(a) By country

| | Jamaica | Malaysia | Nigeria | Ghana | Denmark | S.Africa | India | Argentina | Brazil | Australia | Italy | Germany | Canada | U.S.A. | France | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Purchases by subsidiaries of capital equipment from U.K. (£ million per year) (1) | 0.3 | 1.4 | 1.1 | 0.5 | 0.1 | 1.4 | 2.3 | 0.3 | 0.3 | 2.7 | 0.1 | 0.1 | 1.5 | 0.2 | 0 | 12.3 |
| Expenditure on fixed assets (£ million per year) (2) | 1.1 | 5.5 | 4.3 | 2.1 | 0.6 | 6.4 | 13.7 | 1.9 | 2.0 | 25.5 | 1.3 | 4.0 | 43.3 | 13.1 | 4.6 | 129.3 |
| (1) as % of (2) | *26.0* | *25.6* | *25.2* | *25.1* | *21.9* | *21.3* | *16.9* | *15.3* | *12.3* | *10.5* | *9.2* | *3.6* | *3.4* | *1.4* | *0.5* | *9.5* |
| Total U.K. machinery exports (£ million per year) (3) | 3.8 | 17.7 | 13.3 | 7.0 | 15.9 | 54.7 | 62.7 | 10.8 | 6.1 | 73.1 | 29.2 | 37.6 | 47.3 | 48.4 | 40.1 | 467.5 |
| (1) as % of (3) | *7.2* | *7.9* | *8.1* | *7.6* | *0.8* | *2.5* | *3.7* | *2.7* | *4.1* | *3.7* | *0.4* | *0.4* | *3.1* | *0.4* | *0.1* | *2.6* |

(b) By industry

| | Vehicles & components | Textiles | Building materials, etc. | Chemicals | Non-electrical engineering | Food, drink, tobacco, etc. | Metals & metal products | Electrical engineering | Paper | Total manufacturing | Mining | Plantations | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Purchases by subsidiaries of capital equipment from U.K. (£ million per year) (1) | 1.9 | 0.8 | 0.6 | 2.4 | 0.2 | 2.1 | 2.1 | 0.2 | 0.4 | 10.7 | 1.1 | 0.5 | 12.3 |
| Expenditure on fixed assets (£ million per year) (2) | 9.1 | 4.3 | 4.2 | 18.8 | 1.5 | 20.0 | 22.0 | 5.1 | 17.0 | 102.1 | 20.6 | 6.6 | 129.3 |
| (1) as % of (2) | *20.7* | *18.0* | *14.5* | *12.6* | *10.6* | *10.5* | *9.7* | *4.4* | *2.4* | *10.5* | *5.2* | *8.2* | *9.5* |

*Notes*: (1) For purchases of capital equipment and for U.K. machinery exports the annual average is 1955 – 64.

(2) Expenditure on fixed assets is the annual average of depreciation *plus* the change in net fixed assets over the nine-year period from end-1955 to end-1964.

*Commentary*: The figures for Jamaica now include an allowance for the company that was omitted from that country in the Interim Report.

Table VI.2. Purchases of input items from the U.K. by subsidiaries in the 15 specified countries

(Annual averages)

(a) By industry

| | Vehicles & components | Non-electrical engineering | Building materials, etc. | Electrical engineering | Textiles | Metals & metal products | Chemicals | Food, drink, tobacco, etc. | Paper | Total manufacturing | Mining | Plantations | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Purchases from U.K. (£ million) | 19.2 | 3.5 | 3.9 | 3.8 | 3.0 | 6.3 | 4.2 | 6.5 | 0.1 | 50.5 | 1.0 | 1.2 | 52.7 |
| Net operating assets (£ million) | 104 | 20 | 47 | 51 | 67 | 160 | 148 | 345 | 133 | 1,075 | 111 | 95 | 1,281 |
| Purchases from U.K. as % of net operating assets | *18.5* | *17.2* | *8.4* | *7.6* | *4.5* | *3.9* | *2.8* | *1.9* | *0.1* | *4.7* | *0.9* | *1.2* | *4.1* |
| Value of production (£ million) | 149.7 | 34.2 | 40.1 | 93.9 | 69.2 | 256.7 | 145.3 | 728.1 | 81.7 | 1,598.8 | 92.5 | 84.1 | 1,775.4 |
| Purchases from U.K. as % of value of production | *12.8* | *10.2* | *9.8* | *4.1* | *4.3* | *2.5* | *2.9* | *0.9* | *0.2* | *3.2* | *1.1* | *1.4* | *3.0* |

(b) By country

| | South Africa | Jamaica | Australia | Malaysia | Ghana | India | Germany | Nigeria | Argentina | Denmark | Canada | Italy | Brazil | France | U.S.A. | Total 15 countries |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Purchases from U.K. (£ million) | 12.7 | 1.0 | 16.1 | 3.3 | 1.5 | 7.0 | 1.2 | 2.0 | 0.5 | 0.1 | 5.4 | 0.1 | 0.3 | 0.1 | 1.4 | 52.7 |
| Net operating assets (£ million) | 97 | 8 | 202 | 55 | 25 | 156 | 30 | 51 | 15 | 5 | 295 | 8 | 27 | 23 | 284 | 1281 |
| Purchases from U.K. as % of net operating assets | *13.0* | *12.1* | *8.0* | *6.0* | *6.0* | *4.5* | *4.1* | *4.0* | *3.2* | 2.6 | *1.8* | *1.4* | *1.1* | *0.6* | *0.5* | *4.1* |

*Note*: For purchases and value of production the annual average is for the years 1955 – 64; for net operating assets the annual average is for the years 1955 – 63.

*Commentary*: The figures for Jamaica now include an allowance for the company that was omitted from that country in the Interim Report.

Table VI.3. Purchases of input items from U.K. as percentage of total output of subsidiaries of U.K. manufacturing companies in the 15 specified countries

%

| Industry | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 |
|---|---|---|---|---|---|---|---|---|---|---|
| Vehicles & components | 11.8 | 12.5 | 12.2 | 14.3 | 11.3 | 13.3 | 10.8 | 11.6 | 13.4 | 15.4 |
| Non-electrical engineering | 22.3 | 14.6 | 12.0 | 18.7 | 13.2 | 9.2 | 5.5 | 7.3 | 7.2 | 4.4 |
| Building materials, etc. | 9.6 | 10.5 | 12.2 | 11.2 | 11.2 | 12.0 | 8.6 | 9.5 | 7.5 | 7.7 |
| Textiles | 2.0 | 2.5 | 2.6 | 3.1 | 3.9 | 5.0 | 4.5 | 4.9 | 6.2 | 6.7 |
| Electrical engineering | 3.7 | 4.4 | 3.9 | 4.0 | 4.6 | 5.3 | 4.8 | 4.9 | 3.8 | 2.8 |
| Chemicals | 2.9 | 2.9 | 2.6 | 2.4 | 2.3 | 3.0 | 2.4 | 3.1 | 3.3 | 3.3 |
| Metals & metal products | 1.2 | 2.2 | 2.3 | 2.9 | 2.5 | 2.5 | 3.2 | 2.6 | 2.1 | 2.4 |
| Food, drink, tobacco, etc. | 0.8 | 0.8 | 0.9 | 0.9 | 1.1 | 0.9 | 1.0 | 0.9 | 0.9 | 0.9 |
| Paper | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| Total manufacturing | 2.9 | 3.1 | 3.1 | 3.6 | 3.2 | 3.3 | 2.9 | 3.0 | 3.1 | 3.4 |

Table VI.4. Purchases of goods for resale from U.K. by subsidiaries of manufacturing companies in the 15 specified countries

| | Ten-year average 1955–64 | 1956 | 1963 | Change between 1956 and 1963 |
|---|---|---|---|---|
| | | £ million | | % |
| *A. Purchases from U.K. of goods for re-sale (f.o.b.) by* | | | | |
| 1. 'Selling' subsidiaries | 22.4 | 13.7 | 25.9 | +89.1 |
| 2. 'Manufacturing' subsidiaries | 14.1 | 15.3 | 14.3 | – 6.5 |
| 3. 'Mixed' subsidiaries | 73.7 | 85.5 | 66.7 | –22.0 |
| 4. All the above subsidiaries | 110.2 | 114.5 | 106.9 | – 6.6 |
| *B. Total sales of goods and services by* | | | | |
| 5. 'Selling' subsidiaries | 44.0 | 26.1 | 57.5 | +120.9 |
| 6. 'Manufacturing' subsidiaries | 1,437.2 | 1,122.1 | 1,740.2 | + 55.1 |
| 7. 'Mixed' subsidiaries | 435.1 | 360.6 | 528.8 | + 46.6 |
| 8. All the above subsidiaries | 1,916.3 | 1,508.8 | 2,326.5 | + 54.2 |
| *C. A as % of B for* | | | | |
| 9. 'Selling' subsidiaries | 50.9 | 52.5 | 44.9 | – 7.6 |
| 10. 'Manufacturing' subsidiaries | 1.0 | 1.4 | 0.8 | – 0.6 |
| 11. 'Mixed' subsidiaries | 16.9 | 23.7 | 12.6 | –11.1 |
| 12. All the above subsidiaries | 5.8 | 7.6 | 4.6 | – 3.0 |
| *D. Total U.K. exports to the 15 specified countries* | 1,748.3 | 1,450.3 | 2,000.5 | +38 |

*Notes*: For classification of the different types of subsidiary, see p. 47.

Subsidiaries classified as materials suppliers are not included in this table. Also omitted are a very small number of subsidiaries which were unable to supply figures of their imports for re-sale even though these were known to be significant.

Table VI.5. Purchases from U.K. for resale by 'mixed' subsidiaries, 1956 and 1963

| | Change in ratio of purchases from the U.K. for re-sale to total sales (%) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Fall of 30 or more | Fall, 20 – 30 | Fall, 10 – 20 | Fall, 0 – 10 | Rise, 10 or less | Rise, more than 10 | Total |
| No. of subsidiaries | 12 | 7 | 6 | 13 | 6 | 6 | 50 |
| Purchases from U.K. for re-sale (£ million) | | | | | | | |
| 1956 | 23.3 | 22.2 | 4.3 | 29.2 | 2.9 | 3.6 | 85.5 |
| 1963 | 13.1 | 6.5 | 5.1 | 24.9 | 4.6 | 7.6 | 61.9 |
| Change | –10.2 | –15.7 | +0.8 | –4.2 | +1.7 | +4.1 | –23.6 |

*Note*: This table is confined to subsidiaries operating in both years, which reported purchases from the U.K. for re-sale in one or both years.

Table VII.1. Output, supplies to U.K. group, net assets and U.K. stake of materials-producing subsidiaries,[a,b]

| Item | Mining | Plantations | Manufacturing | Total of mining plantations & manufacturing | Oil |
|---|---|---|---|---|---|
| Number of reporting U.K. groups concerned | 17[c] | 77[c] | 7 | 101[c] | 3 |
| Number of 'cases'[d] | 26 | 77 | 9 | 112 | – |
| Value of output (annual average: £ million) | 96.6 | 84.1 | 33.0 | 213.7 | 1,384.5 |
| Value of goods supplied to U.K. group (annual average: £ million) | 3.2 | 0 | 8.7 | 11.9 | 139.2[e] |
| Supplies to U.K. group as per cent of material producer's output | *3.4* | *0* | *26.3* | *5.6* | *10.1* |
| Per cent increase in value of supplies to U.K. group 1955–7 to 1962–4 | *148* | *0* | *423* | *294* | *39* |
| Net operating assets (annual average: £ million) | 111.1 | 95.3 | 35.2 | 241.6 | 1,172.0[f] |
| U.K. group's stake (annual average: £ million) | 85.3 | 92.7 | 16.8 | 194.8 | 918.9[f] |

Notes: [a] Materials-producing subsidiaries – subsidiaries etc. whose main output consists of 'materials', i.e. commodities of a type that the U.K. imports.
(For a fuller definition, see the *Notes* to the original version of this table, p. 76.)

[b] Figures for mining and manufacturing relate to subsidiaries etc. *in the fifteen specified countries*, whereas figures for oil refer to subsidiaries etc. *in all overseas countries.*

[c] In this table, tin mining companies and plantation companies are treated as separate U.K. groups.

[d] 'Case' refers to a subsidiary etc. or a collection of subsidiaries etc. reported on an individual Form 1 (i.e. a particular U.K. group in a particular country).

[e] Oil supplied to the U.K. group for consumption in the U.K. Valued f.o.b. at commercial prices.

[f] Assets of oil companies' subsidiaries etc. are not strictly comparable with those of mining and manufacturing groups. For a fuller explanation see *Notes* to Table VIII.1 (page 80).

Table X.1. Estimated effect of overseas production by subsidiaries in the 15 specified countries on U.K. exports of capital goods

| | Vehicles & components | Textiles | Building materials | Chemicals | Non-electrical engineering | Metals & metal products | Food, drink, tobacco, etc. | Electrical engineering | Paper | Total manufacturing | Mining | Plantations | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Actual purchases of capital goods from U.K. by overseas subsidiaries in ten years, 1955-64 (£ million) | 18.9 | 7.8 | 6.1 | 23.7 | 1.6 | 21.3 | 21.1 | 2.2 | 4.0 | 106.7 | 10.6 | 6.0 | 123.3 |
| 2. Reduction in purchases of U.K. capital goods which might have been experienced if subsidiaries had been in non-U.K. ownership[a] | | | | | | | | | | | | | |
| (a) In £ million | 13.8 | 5.7 | 5.0 | 19.0 | 1.1 | 18.9 | 11.8 | 1.2 | 1.8 | 78.4 | 9.2 | 4.4 | 92.1 |
| (b) As % of 1. | *73* | *74* | *82* | *80* | *71* | *89* | *56* | *54* | *45* | *74* | *87* | *73* | *75* |
| 3. Increase in net operating assets of subsidiaries in nine years, 1956 – 64 (£ million) | 60.5 | 26.4 | 28.8 | 110.9 | 9.3 | 165.9 | 157.5 | 41.6 | 121.7 | 722.6 | 147.6 | 22.1 | 892.3 |
| 4. 'Effect of U.K. ownership' (row 2(a)) expressed as % of 3, on basis of annual rates | *21* | *20* | *16* | *15* | *11* | *10* | *7* | *3* | *1* | *10* | *6* | *18* | *9* |

[a] This measures the effect of U.K. ownership of the overseas producing units on U.K. exports of capital goods. The figures are our 'best guess' – see Appendix E.

*Commentary*: In the original version of this table (p.90), *item 3* failed to exclude the effect of revaluations.

(For Table XI.1, see page 361.)

Table XII.1. Estimated effect of overseas production by subsidiaries in the 15 specified countries on U.K. exports of non-capital goods

| | Non-electrical engineering | Vehicles | Electrical engineering | Food, drink, tobacco, etc. | Paper | Metals & metal products | Building materials, etc. | Textiles | Chemicals | Total manufacturing | Mining | Plantations | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Actual purchases from U.K. by overseas subsidiaries in ten years, 1955-64 (£ million) | | | | | | | | | | | | | |
| (a) Input items | 34.8 | 191.9 | 38.5 | 64.8 | 1.4 | 63.1 | 39.2 | 30.0 | 41.6 | 505.2 | 10.5 | 11.6 | 527.2 |
| (b) Finished goods for re-sale | 13.6 | 307.8 | 102.6 | 285.4 | 27.4 | 71.0 | 14.4 | 45.9 | 239.3 | 1,107.6 | 0.4 | – | 1,108.0 |
| (c) Total of above | 48.4 | 499.7 | 141.1 | 350.2 | 28.8 | 134.1 | 53.6 | 76.0 | 280.9 | 1,612.7 | 10.9 | 11.6 | 1,635.2 |
| 2. 'Effect of U.K. ownership'[a] (in £ million) 1955-64, on | | | | | | | | | | | | | |
| (a) Input items | +26.2 | +140.1 | +35.0 | +48.0 | +1.1 | +50.4 | +32.3 | +24.5 | +35.0 | +392.8 | +9.0 | +1.0 | +402.9 |
| (b) Finished goods | + 8.4 | – 32.8 | –18.3 | –41.3 | –1.8 | –54.1 | –33.5 | –33.2 | –63.9 | –270.4 | 0 | – | –270.4 |
| (c) Total of above | +34.6 | +107.4 | +16.7 | + 6.8 | –0.7 | – 3.7 | – 1.1 | – 8.7 | –28.8 | +122.5 | +9.0 | +1.0 | +132.6 |
| 3. 2(c) as % of 1(c) | *+72* | *+21* | *+12* | *+ 2* | *–2* | *– 3* | *– 2* | *–11* | *–10* | *+ 8* | *+83* | *+9* | *+ 8* |
| 4. Average net operating assets 1955-63 (£ million) | 20.2 | 103.6 | 50.9 | 345.4 | 132.6 | 159.9 | 46.6 | 67.1 | 148.1 | 1,074.5 | 111.1 | 95.3 | 1281.0 |
| 5. Average annual effect of U.K. ownership (one-tenth of row 2(c)) as % of average net operating assets (row 4)) | *+17* | *+10* | *+3* | *0* | *0* | *0* | *0* | *–1* | *–2* | *+1* | *+1* | *0* | *+1* |

[a] The estimated reduction in purchases from the U.K. that would have been experienced if the subsidiaries had not been in U.K. ownership; where an *increase* would have been likely the figure is negative. The figures are our best guesses. See Appendix E.

Table XII.2. Estimated direction of effect on U.K. non-capital goods exports of production by subsidiaries in the 15 specified countries, by industry

| | Number of cases[a] | | |
|---|---|---|---|
| | Favourable effects | Unfavourable effects | Percentage of favourable cases |
| Vehicles & components | 21 | 0 | 100 |
| Non-electrical engineering | 20 | 0 | 100 |
| Metals & metal products | 17 | 6 | 74 |
| Food, drink, tobacco, etc. | 35 | 14 | 71 |
| Electrical engineering | 14 | 10 | 58 |
| Paper | 4 | 3 | 57 |
| Textiles | 7 | 8 | 47 |
| Building materials, etc. | 8 | 9 | 47 |
| Chemicals | 20 | 24 | 45 |
| Total manufacturing | 146 | 74 | 66 |
| Mining | 17 | 0 | 100 |
| Plantations | 77 | 0 | 100 |
| Total | 240 | 74 | 76 |

[a] Each case represents the operations of the subsidiary (or subsidiaries) of one parent group in one overseas country.

Table XII.3. Estimated direction of effect on U.K. non-capital goods exports of manufacturing by subsidiaries in the 15 specified countries, by country

| | Number of cases[a] | | |
|---|---|---|---|
| | Favourable effect | Unfavourable effect | Percentage of favourable cases |
| Ghana | 4 | 0 | 100 |
| Jamaica | 4 | 0 | 100 |
| Nigeria | 11 | 1 | 92 |
| Malaysia | 9 | 2 | 82 |
| India | 21 | 6 | 78 |
| Australia | 23 | 11 | 68 |
| S. Africa | 21 | 10 | 68 |
| Canada | 20 | 10 | 67 |
| Denmark | 4 | 2 | 67 |
| Germany | 7 | 5 | 58 |
| Brazil | 5 | 5 | 50 |
| Argentina | 5 | 6 | 45 |
| U.S.A. | 6 | 8 | 43 |
| France | 3 | 4 | 43 |
| Italy | 3 | 4 | 43 |
| Total, 15 countries | 146 | 74 | 66 |

[a] This table covers subsidiaries of manufacturing companies only.

Table XII.4. Estimated effect of U.K. ownership of overseas subsidiaries on U.K. exports of services to 15 specified countries

(Ten-year total, 1955 – 64)

| Industry | Type of service (£ million) | | | | Total effect related to net operating assets (% per annum) |
|---|---|---|---|---|---|
| | Freights, etc. | Management fees, licences, etc. | Other[a] | Total[a] | |
| Non-electrical engineering | 1.7 | –0.1 | – | 1.6 | 0.8 |
| Food, drink, tobacco, etc. | 0.3 | 24.1 | 2.0 | 26.5 | 0.8 |
| Textiles | –0.4 | 4.4 | – | 4.0 | 0.6 |
| Vehicles & components | 5.4 | –3.4 | – | 2.0 | 0.2 |
| Electrical engineering | 0.8 | –0.3 | – | 0.5 | 0.1 |
| Building materials, etc. | –0.1 | –0.3 | – | –0.4 | 0.1 |
| Chemicals | –1.4 | 1.5 | – | 0.1 | 0 |
| Paper | 0 | –1.2 | – | –1.3 | –0.1 |
| Metals & metal products | –0.2 | –1.5 | – | –1.7 | –0.1 |
| Total manufacturing | 6.1 | 23.3 | 2.0 | 31.4 | 0.3 |
| Mining | 0.5 | 11.4 | 4.0 | 15.9 | 1.4 |
| Plantations | 0.1 | 3.1 | – | 3.2 | 0.3 |
| Total | 6.6 | 37.8 | 6.0 | 50.4 | 0.4 |

[a] So far as we have assessed them (see Chapter XXI, section F).

*Note*: A negative sign means that the operations of subsidiaries led to a reduction in exports of the relevant services.

*Commentary*: The figures for the effect on licence fees, included in the second column, have been revised in the light of information obtained on Form 3. The total is little affected, but effects for Metals and Food, drink, tobacco, etc., are rather more 'favourable' than in the earlier version of this table, while those for Electrical engineering, Vehicles and Chemicals are rather less so.

Table XIV.1. Effects of increase in net operating assets of £100 (£)

| Industry | Initial effect on exports (1) | Continuing effects |  |  | 9-year addition to net operating assets, 1956–64,* (£ million) |
|---|---|---|---|---|---|
|  |  | Profits after overseas tax (2) | Profits plus capital appreciation (3) | Additional exports of goods and services from the U.K. (4) |  |
| Building materials, etc. | 16 | 13.8 | 18.7 | −½ | 49.0 |
| Chemicals | 15 | 7.7 | 14.9 | −2 | 128.2 |
| Textiles | 20 | 8.0 | 11.7 | −½ | 37.1 |
| Food, drink, tobacco, etc. | 7 | 8.5 | 10.1 | 1 | 197.0 |
| Vehicles & components | 21 | 5.3 | 8.0 | 10½ | 90.4 |
| Metals & metal products | 10 | 6.8 | 7.5 | −½ | 174.4 |
| Electrical engineering | 3 | 5.6 | 7.2 | 3½ | 44.2 |
| Paper | 1 | 6.2 | 6.1 | 0 | 124.2 |
| Non-electrical engineering | 11 | 5.3 | 4.9 | 18 | 11.0 |
| Total manufacturing | 10 | 7.7 | 10.1 | 1½ | 855.5 |
| *Ditto, adjusted*(5) | *11* | *5½* | *7½* | *1½* | *755* |
| Mining | 6 | 12.3 | 21.6 | 2 | 154.3 |
| Plantations | 18 | 9.3 | 7.7 | ½ | 22.1 |
| Total | 9 | 8.2 | 10.8 | 1½ | 1031.9 |

*General Notes*: All figures are 'average' results, as described in the text and relate to the period 1955–64. All figures are 'differences as compared with the alternative position', apart from the right-hand column.

*Specific Notes*: (1) Additional U.K. exports of capital goods (without allowance for freight) expressed per £100 increase in net operating assets. (Derived from data for subsidiaries in the 15 specified countries.)

(2) Profits after overseas taxation and depreciation, but before deduction of interest on non-current liabilities, expressed per £100 of net operating assets at the beginning of the year. (Derived from data relating to subsidiaries, etc., in all overseas countries.)

(3) As (2), but including the increase in the market value of 'securities' representing the U.K.'s stake in the overseas subsidiary etc. (Derived from data relating to subsidiaries, etc., in all overseas countries.

(4) Effect on U.K. exports of overseas production by U.K. subsidiaries, etc., converted to an annual average and expressed as a percentage of average net operating assets. (Derived from data relating to subsidiaries in the 15 specified countries.)

(5) Adjusted on a replacement cost basis and to eliminate the effects of general price rises on inventories and on companies' market valuations.

* Derived from figures relating to all oversea countries. This column is given as a guide to the relative importance of investment in the different industries.

For commentary, see next page.

*Commentary*: The adjustment to profits etc., adopted in the Final Report in order to put them on a 'true' economic basis goes further than the adjustment employed in the Interim Report, in that it introduces allowances for stock appreciation and for the element of inflation in capital appreciation. As a result, the 'adjusted' figures of *profits after overseas tax* and *profits plus capital appreciation* for manufacturing subsidiaries are somewhat lower here than if they had been given on the Interim Report basis; e.g., profits after overseas tax come out at £5½, rather than the £6 which would have resulted from the original basis.

Correspondingly, our (adjusted) assessment for the growth of assets has been reduced, so that our method of computing the initial effect on exports gives a rather higher answer on the adjusted basis.

Note that the adjustments are here confined to manufacturing subsidiaries, and are not given for the whole sample (excluding oil) as they were in the original version of this table (pages 124–5).

As a corollary, the first two paragraphs of page 54 should now read as follows:

'(a) Pre-tax profits were shown in Table IV.1 as averaging about 14.3 per cent of the book value of net operating assets for subsidiaries of manufacturing companies; this figure might be reduced by about one-fifth to 11.1 per cent by the use of replacement costs for fixed assets and annual depreciation, and after deducting stock appreciation from profits.

(b) Post-tax income accruing to the U.K. Group was shown in Table IV.2 as averaging 8.1 per cent of the book value of the Group's stake in subsidiaries of manufacturing companies and deduction of stock appreciation might reduce this by about one-third to about 5.5 per cent.'

The question of adjustments to profits is discussed in Chapter XXI, Section D.

The revision of licence fees, mentioned in connection with Table XII.4, necessitated in turn some slight modifications to the fifth column of the present table, but these do not affect the (rounded) totals for manufacturing and for the the sample as a whole.

A companion table to the present one, relating essentially the same effects to an increase in U.K. stake, may be found on page 236.

# Appendix I

# Plantations

This appendix describes the survey of the plantation companies, which was conducted separately from the enquiry into manufacturing and mining, although the philosophy and method of approach were similar in most respects. It also contains the main discussion of the historical record for plantations, and of the effects of investment (or, in this case, disinvestment) in plantations.

For comparative purposes, the statistical results for plantations are presented alongside manufacturing and mining in the regular tables of the Report. We hasten to say that this implies no departure from our view, confirmed by the research, that investment in plantations – as in manufacturing or mining – raises its own particular problems; and that it is preferable to distinguish between the main kinds of investment when discussing effects.

Although the main statistical tables are to be found elsewhere, the principal statistics for plantations will be given in this appendix, with details for the two main kinds of activity covered.

## A. The Sample

Since U.K. sugar plantations in the West Indies were included as materials-producing subsidiaries of manufacturing companies in the Interim Report, it seemed that the major kinds of plantations to be tackled in the survey were probably rubber and tea. This impression was strengthened in the course of preliminary discussions which we had with associations representing the interests of plantation companies.

Both rubber and tea plantation industries are characterised by a relatively large number of independent companies whose operations are almost wholly overseas. The U.K. affairs and accounts of most of the U.K. registered rubber companies (and a number of the tea companies) are handled in London by specialist firms known as 'agency houses' or 'managing agencies'. In addition to their functions as agents and secretaries these firms provide a full management service to many of their clients.

In rubber growing there has been a tendency in recent years for mergers and amalgamations to take place among operating companies, with the result that the degree of concentration in rubber is rather higher than that in tea, where the pattern is still basically one of a multiplicity of fairly small independent producers.

In these circumstances we had to rely heavily in our approach to the companies on the good offices of the relevant industry associations – the Indian Tea Association and the Rubber Growers' Association (most of whose members operate mainly in Malaysia). We set out to cover a substantial proportion of members' production in each case, the size of our sample being limited very much by the capacity of the associations and the response which they could expect from their members. In fact our expectations were exceeded in both cases. We received usable returns from fourteen rubber companies (or groups of companies), accounting for about 45 per cent of total rubber production by U.K. companies in Malaysia: and from over sixty tea companies (or groups), accounting for the great bulk of tea production by U.K.-registered companies in India. (The names of the companies are given in Appendix K.)

Particular credit for the excellent response from both industries is due to the officials of the associations, who organised returns and meetings, and acted as liaison between the Department and the agencies and companies throughout the survey. The Indian Tea Association assisted the Department in producing a modified questionnaire form for the tea companies which probably ensured a considerably better response from that industry than we could have otherwise hoped for. Our thanks are also due to the many accountants who undertook the burden of completing the forms, and to the industry spokesmen who took part in discussions with us and responded to our questions with the utmost patience and frankness. The survey depended heavily on cooperation from all these people, and we are truly grateful for their efforts at all stages of the work.

The book value of the U.K.'s share in the capital employed (U.K. stake) in the plantation companies in our sample amounted to £110 million at the end of 1964. According to the Board of Trade, the book value of net assets (attributable to U.K. parent companies) of U.K. branches and subsidiaries overseas classified under 'agriculture (including plantations)' was about £354 million at the end of 1964.[1] Hence our 'plantations' correspond to about one-third of U.K. direct investment in plantations of all kinds, and consequently amount to a good part of the field, although they are clearly not representative of plantations other than rubber and tea.

Although the survey relates essentially to rubber and tea, it was most convenient for participating companies to report for the whole of their operations, and in some cases these included substantial production of other plantation crops. Diversification is particularly common among the rubber growers; most rubber estates nowadays produce one or more subsidiary crop (principally palm oil and kernels, but also coconuts, and occasionally cocoa on a small scale). Indeed, one of the fourteen companies included in our sample for rubber produced mainly palm oil, although it is a member of a rubber-growing group. It is perhaps more correct therefore to regard this survey as covering the U.K. plantation industries in Malaysia and India, rather than purely rubber and tea.

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[1] Since the publication of the Interim Report, the Board of Trade definition of 'net assets attributable to U.K. parent companies' has been changed, and now corresponds closely to our 'U.K. stake'.

## B. The Questionnaire and its Completion

The procedure for obtaining information from the plantations was similar to that followed in the main enquiry (described in Appendix B). Of the numerous technical and accounting points which arose in the course of completing the forms a couple have quite substantial bearing on the results, and merit attention here.

The first concerns the allocation of net assets between U.K. and overseas. Any division of a plantation company's assets between the U.K. 'parent' and its Malaysian or Indian 'branch' must to some extent be arbitrary. The general rule followed, after some deliberation, was that a company's holding of purely financial assets, apart from its cash balances held overseas, should not be attributed to the overseas branch. Thus, 'net operating assets' in our tables are the total assets as valued in the books of the companies (not including their holdings of trade investments), *less* current liabilities to outsiders and *less* the book value of net U.K. assets (mainly cash and other current assets held in the U.K., including the company's holding of U.K. gilt-edged and other securities). That is to say, we give figures for U.K. investment in rubber and tea *estates*, and the profitability of such estates; we are not concerned in this enquiry with the purely financial assets of the plantation companies, except to note that these are held mainly in the U.K., and that we deduct them from the companies' balance sheets in order to arrive at U.K. direct investment in plantations. This is a point of some quantitative importance, since many plantation companies own substantial holdings of liquid assets, mostly denominated in sterling.

Furthermore, when calculating net operating assets in the survey, we do not take account of foreign shareholdings in the U.K. plantation companies. These we regard as inward portfolio investment by foreigners in the U.K. 'parent', which do not affect the latter's stake in its branch. This procedure and that outlined in the previous paragraph are exactly in line with what was done in the main enquiry and conform to the philosophy laid down in Part I of the Interim Report.

The second point concerns the basis for the market valuation of U.K. stake in plantations. Estimates for market valuation were requested on the forms using the same instructions as those adopted in the main enquiry – namely, that the U.K.'s share in the business (virtually equivalent to net operating assets in the case of the plantation companies, but not quite) should be valued on the basis of the London stock exchange valuation of the company's shares, if available, after deducting the book value of the net U.K. assets. This is in fact what was done for plantations, and the figures in Tables V.2 and 3 (Appendix H) are on this basis, as are the estimates for capital appreciation in Table V.4.

This method of valuation was strongly criticised by the industries' representatives on the ground that the stock exchange price can be a grossly misleading indicator of the true worth of the companies, being unduly influenced by short term political considerations which have little to do with economic performance and longer term prospects. Scepticism as to the usefulness of these figures was expressed by the rubber growers in particular, who were able to show that for leading rubber companies a valuation for 1964 obtained by capitalising profits using a conventional price-earning ratio exceeded a valuation based on the stock exchange price by over 100 per cent. They argued on this and other grounds that individual rubber estates could have been sold in 1964 for much more than is implied by the stock exchange valuation, and for very much more in 1955, when selling prices of estates were extremely favourable.

While accepting that a valuation based on stock market prices may be a far from reliable indicator of what can be got from selling plantations piecemeal, especially where the disinvestment is on a small scale and highly selective in character, we nevertheless feel that the figures derived from the stock market valuation should be given in the tables alongside comparable figures for other industries – some of which are clearly subject to similar criticism. The stock market valuation is, after all, the only completely objective measure available and it is a *market* valuation (both in London and locally, since share prices do not differ much between the exchanges).

At the same time, we are persuaded that the valuation placed on companies by investors in the world's financial centres need not be the same thing as the value arising in a transaction where the buyer acquires exclusive ownership of a few estates, and that it is the latter 'break-up' value which is probably more relevant when discussing the effects of disinvestment in plantations. Accordingly, when we consider disinvestment in a later section of this appendix we use values for U.K. stake based on the *profitability* of the plantations, not on the stock market price.

A final point before proceeding to the results concerns the treatment of certain rubber *processing* companies in the tables. Many rubber growers own and operate processing plants on their estates, but a number of central plants are run as joint ventures, set up as independent companies (some U.K. registered) in which growers participate as shareholders. The object is to provide a low cost service to the owners, rather than to make profits for the processing companies. It was thought best to include these independent processors as trade investments of the 'branches', rather than as additional U.K. companies in the sample.

## C. The Historical Record

The main features of the historical record for plantations are presented in Table I.1. which gives separate figures for rubber and tea.

The rate of profit on U.K. stake (after overseas tax) for the rubber companies, 15.3 per cent, was the highest of any industry in our sample, whereas tea comes rather low in the list of industries (see Table IV.2, Appendix H).

Growth of both plantation industries, as measured by the rate of additions to net operating assets, was more moderate than for any other industry in the sample,

Table I.1. Main items of the historical record for the plantation companies

(Annual averages except where indicated; £ million)

| | Rubber | Tea | Total of Rubber & Tea |
|---|---|---|---|
| Profitability, growth, etc. | | | |
| Net operating assets | 30.6 | 64.7 | 95.3 |
| Pre-tax profits | 6.8 | 8.0 | 14.8 |
| % Profitability on net operating assets | *22.3* | *12.4* | *15.5* |
| U.K. stake | 31.1 | 61.6 | 92.7 |
| Post-tax profits accruing to U.K. | 4.8 | 4.1 | 8.9 |
| % Profitability on U.K. stake | *15.3* | 6.7 | 9.6 |
| Additions to net operating assets (1964 less 1955) | 8.7 | 13.4 | 22.1 |
| Additions as % of 1955 | *34.0* | *21.9* | *25.5* |
| Market value of U.K. stake in 1955[a] | 16.8 | 73.4 | 90.2 |
| % excess over book value, 1955 | *–34.2* | *28.7* | *9.2* |
| Market value of U.K. stake in 1964[a] | 30.6 | 70.4 | 101.1 |
| % excess over book value, 1964 | *–19.2* | *–2.6* | *–8.3* |
| Capital appreciation[a] | 0.5 | –2.0 | –1.5 |
| 'Combined return' to U.K. stake | 5.2 | 2.1 | 7.4 |
| % 'Combined return' on U.K. stake | *16.8* | *3.4* | *8.0* |
| Sales, purchases of U.K. exports, etc. | | | |
| Sales of output[b] | 24.6 | 59.4 | 84.0 |
| Purchases of capital equipment from U.K. | 0.3 | 0.2 | 0.5 |
| % of annual expenditure on fixed capital | *18.8* | *5.2* | *9.3* |
| Purchases of input items from U.K. | 0.5 | –[c] | 0.5 |
| % of net operating assets | *1.7* | – | *0.5* |
| Payments to U.K. for :- | | | |
| (i) management services, etc. | 0.3[d] | –[c] | 0.3[d] |
| (ii) selling commissions and brokerages | 0.3 | –[c] | 0.3 |
| Payments as % of net operating assets | *1.9* | – | *0.6* |

*Notes*: Strictly, 'rubber' stands for 'U.K. plantations in Malaysia' (the great majority of which produce mainly rubber), while 'tea' stands for 'U.K. plantations in India', almost all of which produce tea only.

Purchases of goods from the U.K. and payments for services are largely D.A.E. estimates made with the assistance of companies.

For definitions of items, see Appendix A.

[a] Market valuations and capital appreciation in this table are based on stock exchange values.

[b] Valued 'net f.o.b.'; i.e. freight, brokerage and selling commissions are excluded. Appreciable sales of subsidiary crops, principally palm oil and kernels are included in 'rubber'.

[c] Reported to be 'negligible' by the industry's association.

[d] Mainly London administration charges and directors' fees.

tea being easily the slowest to grow of any (Table IV.4). This reflects in part the sporadic net selling of estates to foreigners, mainly local operators, and in part a rate of expansion by the survivors which was in most cases fairly modest.

The stock exchange valuation of the U.K.'s stake in rubber (in relation to book value) was particularly depressed in 1955, but had improved somewhat by 1964. As a result, a small amount of capital appreciation was experienced in rubber, bringing the 'combined return' after tax to just under 17 per cent. The trend in the stock exchange valuation for tea was decisively the other way, resulting in negative capital appreciation both for tea and for plantations as a whole. The rate of 'combined return' for tea was reduced thereby to 3.4 per cent, the lowest of any industry in our sample (Table V.4).

Total sales of output by the plantations (valued f.o.b. the country of origin) averaged £84 million per annum, or rather less than the value of output by the mining subsidiaries in our sample (Table VII.1). No sales were reported as being made directly to U.K. parent companies, and indeed virtually all rubber and tea is sold to unidentified buyers on the open market. In the opinion of companies, possibly 10 per cent of rubber output and the bulk of tea goes ultimately to U.K. customers.

Purchases of U.K. capital equipment by the plantations as a whole were very much in line with the average for the rest of the sample when related to expenditure on fixed assets, as far as we could estimate the latter (Table VI.1). The difference between the percentages for rubber and tea may to some extent be accounted for by a greater degree of mechanisation in the rubber estates, but it may also reflect a larger element of replanting in fixed capital expenditure by tea companies (something that we tried hard to correct in the case of rubber). Moreover, our estimate of U.K. capital equipment purchases by the rubber companies are probably on the high side, for in a number of cases we accepted 'total purchases of vehicles and machinery' – most of which were said to be of U.K. origin – in the absence of better information.

We should point out that the purchases of U.K. exports given in Table I.1 are more or less rough approximations. Frequently companies could provide information for the most recent year only, and could only guess at the proportion of their total purchases originating in the U.K. Furthermore, our estimates for expenditure on fixed capital are highly unrefined, especially in the case of the tea companies. Too much reliance should therefore not be placed on the figures, although they are sufficient to show that actual purchases of U.K. exports are fairly small in relation to investment in the plantations.

Purchases of input items by the tea companies were stated at the outset to be negligible by the industry's association, and were consequently not asked for on the form. The rubber growers, however, maintained that much of their fertiliser requirements were met indirectly from the U.K., although actual purchases are made from local distributors. Until after 1964 there was little or no fertiliser production in Malaysia, and slightly less than one-half of Malaysia's fertiliser imports were supplied by the U.K. It was therefore assumed that 50 per cent of the fertiliser purchases reported by the rubber growers were U.K. exports. This figure may rather exaggerate the f.o.b. value of fertiliser exports, but one can consider the difference to represent stores, spares, etc. purchased from the U.K.

The resulting figure for annual purchases of input items by both types of plantations combined is smaller when related to average annual net operating assets than for any other industry in the sample except Paper (Table VI.2).

Purchases of U.K. goods for re-sale by plantations were, inevitably, zero.

Of the various categories of U.K. invisible exports generated by the plantation companies, we investigated in detail only those which would be appreciably affected if the plantations were in foreign rather than in U.K. hands. Principal among these are the accounting, secretarial, and managerial services supplied to the rubber growers by their London agencies and offices. These are expenses which were deducted before arriving at branch profit for the year (Item 11 in our form), and are similar in nature to the 'payments for management fees, etc.' reported by mining and manufacturing companies. Most rubber companies reported their actual expenditure and estimates were made for the rest on the basis of 1 to 2 per cent of sales. The total for rubber growers was rather smaller in relation to post-tax profits than for the sample as a whole (see Table IV.9).

In addition to the London agency expenses and directors' fees, the rubber growers generate U.K. earnings in the form of sales commissions and brokerage on the London Commodity Market which, on their advice, we estimated at approximately 1½ per cent of the f.o.b. value of rubber sold through the London market. Since about 75 per cent of the rubber sales of the U.K. companies go through the London market (although no more than about 25 per cent of output actually comes to London – for disposal on the Continent as well as in the U.K.), the U.K. invisible earnings thereby generated amount to possibly £¼ million per annum, or rather under 1 per cent of average net operating assets of the companies.

Comparable items of invisible earnings for the tea companies were stated to be negligible. A good deal of tea is disposed of at local auctions, and the role played by London agencies and offices in the management of the tea companies is less important than in the case of rubber. Admittedly, a substantial amount of Indian tea is transported in British ships, but, as will be seen later this does not result primarily from U.K. ownership of the estates, and it did not seem worthwhile insisting on details from companies, although the actual figure of shipping earnings would doubtless be of some size.

## D. Effects of Disinvestment

In the normal way, this section would discuss the effects of the U.K. doing more (or less) investment in plantations, but it seemed more appropriate in the case of plantations to think in terms of *disinvestment*, since these are industries where some limited selling of U.K. interests actually took place during our period. Figures for the effects of investment are given in the regular tables of the report.

As was explained in Chapter XVIII, the effects of disinvestment do not precisely mirror those of investment, although they bear a strong resemblance. Accordingly, the listing of effects in this section does not match exactly the presentation of effects for plantations in the main statistical tables of the report. For instance, Table X.1 in Appendix H shows that the effect of the plantations being in U.K. rather than foreign ownership was that the value of U.K. capital goods exports was increased on average by £18 per £100 of net investment in the year when the investment was done. This, however, does not mean that the effect of disinvestment in plantations by U.K. companies would have been to reduce U.K. capital goods exports by £18 for every £100 of net operating assets sold, as explained in Chapter XVIII.

The same type of qualification does not apply to 'continuing effects', but one has to bear in mind when considering disinvestment that continuing effects should be related to the *price obtainable* for the assets in question, not the cost for which the U.K. company acquired them; and that it should be the price obtainable at the *beginning* of the period studied.

This raises again the question of the valuation of the plantations for purposes of disinvestment, which was mentioned earlier and which we explored in some detail with companies. Although the rubber growers were strongly of the opinion that the stock exchange value greatly under-rated the true value of rubber estates in 1964 (and *a fortiori* in 1955, when share prices were exceedingly depressed), they were unable to produce much evidence of prices realised in actual transactions, as there were relatively few of any size during the period. They nevertheless maintained that, although it was difficult to dispose of large companies in single transactions at favourable prices and remains so today, it was possible to sell off numbers of small estates to local operators on a reasonable scale, had companies wished to do so. The price at which small plantations can normally be sold, or large estates broken up, bears a conventional ratio to profits which works out at about nine times the pre-tax profits of an estate.

On this basis, the 'break-up' value of the rubber companies in the sample works out as follows:

Table I.2. Break-up value of U.K. rubber plantations in the sample (£ million)

| Net assets of the 'branches' | 1955 | 1964 |
|---|---|---|
| Book value | 25.5 | 37.1 |
| Break-up value[a] | 57.5 | 65.4 |
| % excess over book value | *126* | 76 |

[a] Break-up value of net operating assets *plus* book value of trade investments attributed to the 'branches.'

It should be stressed that this valuation does *not* represent the likely terms on which entire plantation companies could be sold *en bloc* to foreigners. It reflects our assessment of the proceeds that could probably be got on average from selective disinvestment in small units to local proprietors on a fairly limited scale. We certainly do not suggest that the U.K.'s interest in leading rubber companies could be sold on a large scale at these favourable prices ; much less that the entire U.K. stake in rubber could be liquidated on these terms.

A second point which should be stressed is that the 'break-up' value changes appreciably in relation to book value over fairly short periods of time in response to change in the profits of the plantations. It is nevertheless not as variable as the stock exchange valuation.

It is rather harder to generalise about the selling value of the tea companies for disinvestment purposes. We did invite specific information on this matter from the tea companies, who reported sales of estates totalling £2.0 million in book value during our period, the proceeds amounting to £2.7 million. As one would expect, prices realised were extremely variable, ranging from a level equal to book value or a little less in some transactions to twice book value in others. There was no perceptible trend in the ratio over the period, averages showing marked but unsystematic changes between successive years.

In the absence of fuller information, we consider that the ratio emerging from all sales reported during the period is probably a reasonable (approximate) measure of the 'break-up' value of the tea plantations, at least as far as disinvestment on a limited scale is concerned. Accordingly we adopt this figure (about 33 per cent) as measuring the excess of break-up over book value in the case of tea, and we assume that it applied in 1955 – the crucial date for our purposes – and that the ratio remained broadly constant over our period.

It is worth noting that the choice of 'break-up' value here in preference to stock exchange value favours tea but not rubber. Thus the break-up value of the tea companies in our sample moved from being little different from stock exchange value at the end of 1955 to being roughly one-third higher by the end of 1964, reflecting the absolute decline in stock exchange values of tea companies during our period ; whereas the break-up value of rubber companies fell relatively from being approximately three times stock exchange value in 1955 to approximately twice stock exchange value in 1964, reflecting recovery in rubber shares and stagnation of break-up values. This pattern of relative movement explains why, as will be seen later, capital appreciation is positive for tea when calculated for purposes of disinvestment, but negative when given in Table I.1 ; and why positive capital appreciation for rubber in Table I.1 becomes zero (actually very slightly negative in the unrounded figures) when calculated for the purpose of disinvestment.

The various effects of disinvestment in rubber and tea are set out in Table I.3, which follows the approach adopted in Chapter XVIII (see especially Table XVIII.3 page 247).

Note firstly that there are no 'initial effects' of disinvestment on U.K. exports of capital goods.

The 'continuing effects' are related to £100 of net operating assets at 1955 break-up values so that, for instance, a post-tax return of about £15½ per £100 of U.K. stake in rubber at book value becomes about £6½ per £100 of net assets at 1955 break-up value (book value of U.K. stake in 1955 amounting to rather under half

Table I.3. Effects of disinvestment in rubber and tea

(Expressed per £100 of net assets at 1955 break-up values)

| Item | Rubber | Tea | Rubber plus tea[a] |
|---|---|---|---|
| A. *Particulars of notional scale* | | | |
| 1. Break-up value of net assets | 100 | 100 | 100 |
| 2. Book value of net assets | 45 | 75 | 62½ |
| 3. Book value of U.K. stake | 44 | 70 | 59 |
| 4. Break-up value of U.K. stake | 98½ | 95 | 96½ |
| B. *Continuing Losses to U.K.* | | | |
| 5. Post-tax profits accruing to U.K. | 6½ | 4½ | 5½ |
| 6. Ditto, *plus* capital appreciation | 6½ | 5¼ | 6 |
| 7. Exports from U.K. | | | |
| Input items | ¼ | 0 | 0 |
| Services | ¾ | 0 | ½ |
| C. *Continuing Gains to U.K.* | | | |
| 8. Income on *4* | 5 | 4¾ | 4¾ |
| 9. Capital appreciation on *4* | ? | ? | ? |

*Notes*:

Profits, etc. are on an accounting basis; no attempt is made to adjust for replacement cost, etc.

Capital appreciation is calculated using the figures for break-up value of plantations, not stock exchange prices.

We are unable to give definite figures for capital appreciation obtainable from re-investing the proceeds of sales (Item 9).

[a] In effect, of course, this is a weighted average of the industries, as in other tables of the report where industries are combined. Here, the weights are the respective break-up values of net assets in the sample at end - 1955.

the break-up value of corresponding net assets). This represents a 'continuing loss' to the U.K. balance of payments, against which can be set the return that the U.K. could get from re-investing its share of the proceeds of sale in external financial assets of some sort, which we assume to be at the rate of about 5 per cent. Since virtually all the proceeds of a sale would accrue to the U.K. (outside finance for the 'branches' being extremely small), the return for rubber comes out at a round figure of £5 per £100 of break-up value. The corresponding figures for tea are post-tax profits of £4½ and a return on the proceeds of disinvestment of £4¾.

A further 'continuing loss' to the U.K. balance of payments stems from the effect of disinvestment on U.K. exports. Our 'best guess' for the effect on input items exported to Malaysia is that very roughly one-fifth of the flow of such exports depends on the ownership link with the U.K. This is based on the industry's view that small estates in the hands of local Malays or Chinese use a somewhat smalle amount of fertilisers in relation to their size than does the typical U.K. plantation They consequently argue that transfer of part of the industry to local hands would affect U.K. exports through a drop in the total of imported fertilisers, and our estimate attempts to take reasonable account of this. It is not argued that a change of ownership would greatly affect the *proportion* of Malaysian fertiliser requirements supplied from the U.K. The figure for this effect comes out in very round figures at £¼ per £100 of net assets of the rubber companies at 1955 break-up values.

Our estimate for services is that the U.K. would lose the entire flow of a company's payments to London for 'management fees' and for selling commission and brokerages if it were broken up and sold locally. The reasoning here is that management and accounting services would no longer be supplied from London, and that there would be a much greater inclination on the part of foreign owners to sell on the local rubber markets rather than through London. This effect for rubber comes out at about £¾ per £100 of net assets (1955 break-up value).

Finally on services, our judgment was that there would be no perceptible effect on U.K. earnings from freight and insurance. The rubber companies argued that they can exercise an effective preference in favour of ships of the Far Eastern Shipping Conference (which has a strong membership of U.K. lines) in shipment to the U.K., Europe and the Mediterranean; and that local producers have a preference for non-Conference vessels. However we cannot accept that the share of traffic obtained by the Conference lines would be very much affected by disinvestment on the scale we have in mind, or that the rates and discounts offered would be very much affected. In the case of tea, an agreement operates at Indian ports effectively regulating the proportions of cargo carried by ships of Indian and other nationalities (including British), so that U.K. ownership of the tea companies makes little difference to U.K. shipping earnings from tea.

Our argument with respect to insurance is the same as the one used elsewhere in the study – namely, that payments of premiums to U.K. insurance companies, and payments of claims by them, would be little affected by a modest change in the pattern of ownership of overseas companies because of the extent to which international re-insurance takes place among major insurance companies, and the role played by London as a major international centre for insurance and re-insurance.

Our general conclusion, therefore, with regard to U.K. exports of goods and services is that the effects of disinvestment in both tea and rubber are likely to be extremely minor.

This conclusion applies equally to the effect on U.K. imports of plantation products. We see no reason here to modify our general conclusion stated in Chapter XIII, which was that, apart from a small number of exceptional cases, the U.K.

does not obtain imported materials on preferential terms as a result of its direct investments in overseas materials production. Rubber and tea are both sold virtually exclusively in the open market, and in these circumstances there is no scope for discriminating between buyers on grounds of nationality. Unless we assume that the scale of output would be appreciably affected by a transfer of companies to local ownership, or that the new owners would institute a deliberate policy of discrimination against U.K. purchasers – neither of which assumptions seems reasonable – we must conclude that the effect of disinvestment on U.K. imports must within the framework of our model be zero or negligible.

A glance at the table will show that, ignoring capital appreciation, the net continuing effect on the U.K. balance of payments will be a loss of approximately £2½ per annum per £100 worth of disinvestment in the case of rubber, and approximately zero in the case of tea. If capital appreciation is included, the loss in the case of rubber would possibly be reduced to zero, while there might be a *gain* in the case of tea possibly amounting to rather over £1.

The combined figures for rubber and tea are given in order to see what the effect might look like for plantations in general. The impression given by the figures is that the continuing effects of disinvestment in plantations would be very slightly adverse if one ignores capital appreciation, and approximately zero if one brings it in.

# Appendix J

# The Enquiry into International Sharing of Research and Know-how

One extremely important area of study that remained outside the scope of the Interim Report for want of time was the question of the advantages to the U.K. of technical feed-back, research-sharing and so on resulting from British companies having overseas subsidiaries. Although the main part of our enquiry had thrown up some fragmentary information on the subject it was clear that we would need to make a further general approach to companies and that the approach could best be made by means of another form asking for statistical data.

We experienced a good deal of difficulty in devising 'Form 3', not only because it was not clear what questions companies would be able to answer in this field, but also because we were not at all sure about the information we would need until we had had a number of discussions with industrialists. As in the earlier phase of the research, we were extremely fortunate in being able to call upon abundant reserves of good will in a small group of 'guinea pig' companies, with whom we had lengthy discussions before even drafting a form; subsequently they gave us comments on our draft and made pilot attempts at completing it. To these companies – I.C.I., Unilever, and British Insulated Callenders Cables – we owe an enormous debt of gratitude.

When, eventually, the form and explanatory notes had been finalised to our satisfaction they were sent out to some fifty companies: all the manufacturing companies, plus Borax and Rio Tinto-Zinc of the mining companies. (For plantations and the other mining companies we established that this part of the research had no relevance.) The form and notes are reproduced as the Annex to this Appendix.

The job facing the officials of companies asked to complete Form 3 was indeed formidable; it was, moreover, a different kind of task from that of completing the earlier Forms 1 and 2. Those forms had involved companies in a great deal of delving into their own and their subsidiaries' records to produce a ten-year historical record. Form 3 called for some accountancy figures, but mainly for estimates (for one year) of figures which in some cases were not of a kind normally available in company records, together with judgments of effects for which estimates – or 'best guesses' – were needed. Once again, discussions between the research team and companies were to play an indispensable part, but this time it was felt that it would be possible to clear up outstanding difficulties with a combination of telephoning and correspondence – and this with one or two exceptions proved to be the case.

On receiving the form, some companies were able to complete it almost immediately (in some cases because theirs was virtually a 'nil return'). Others however said that completion of the form would involve them in an enormous statistical exercise; others again, for whom the relevant figures appeared to be small, asked whether it was worthwhile for them to make a return. In order to assist companies that responded in this way – and more generally to give an idea of what could be regarded for our purposes as 'negligible' – we devised some rules of thumb relating to orders of magnitude, etc. These were circulated to the relevant companies in the form of an additional note – 'Simplified Instructions for Completing Form 3' (also reproduced in the Annex). It was recommended that, in general, any figure that was probably under £10,000 should be regarded as 'negligible', and that where it was clear that a figure would be less than £25,000 it should be described on the form as 'less than £25,000'; since our general principle was to avoid the risk of under-estimating the benefits of research-sharing, the latter entry was taken as £25,000 for purposes of compilation. Companies were asked to make a special effort to fill in questions 1–5 (the global ones), with the additional assistance that where research carried out overseas was essentially for local use only it was quite acceptable to give 'local use only' as the answer to question 3.[1]

In itself the above would have given no figure for the feed-back of informal knowledge, which was only asked for on a country basis. Companies were therefore also asked to complete the remainder of the form for any country from which the combined 'feed-back' of formal and informal knowledge to the rest of the Group (defined as item 6 *less* item 7 *plus* item 12) was thought to exceed £100,000; if this figure was judged to lie between £25,000 and £100,000 for any country a listing of such countries was asked for, and the Department made a generous assessment of the figure in such cases. Feed-back of less than £25,000 for a country was regarded as negligible. Companies that were unable to mention a specific country as providing significant feed-back were invited to give a figure for all their overseas subsidiaries combined; if significant, this amount was allocated by the Department between countries in rough proportion to overseas output.

With the aid of this further guidance, the original explanatory notes, and communications with the Department, the great majority of companies were able to make their returns to us. Some however, still hesitated to do so and with them we discussed ranges of figures, in a few cases suggesting 'order of magnitude' figures ourselves. Ultimately we managed to obtain usable information on an agreed basis for every one of the companies approached, in respect of all items needed for our main calculation – which was the computation of 'net gain to be added to overseas profits' (see Chapter XXIV) for the sample of companies on a global basis. In the less crucial calculations, such as the measurement of net gain from individual countries, and the 'true' assignment of Group research costs between overseas subsidiaries and the 'rest of the Group' (described in Chapter XXV, section D), we resorted partly to our own approximations and pro-rata allocations for some items. In the cases where companies did not give details of supporting items (overseas research expenditure, etc.), the gaps were filled in using information from alternative sources, including knowledge gained elsewhere in the study. In this way, compilations of figures could be made on a comprehensive basis, rather than excluding companies for the sake of minor gaps in their information.

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[1] The final question on the form, which was designed to provide a check on the results from earlier items, elicited only fragmentary response, and was abandoned.

At all stages of collecting and analysing the data, our general principle, for use when in doubt, was to avoid the risk of underestimating the net gain and the true over-all contribution of the overseas subsidiaries via knowledge-sharing.

Naturally enough, there is some variation in the quality of the returns and in the accuracy of the calculations. But in the nature of the case many of the figures in a survey like this one can be no more than estimates or best guesses – and in virtually every case we feel confident in saying that the companies made a conscientious effort to provide the best estimates possible. In this field we were of course completely dependent upon the companies for information and we are glad to put on record yet again our sincere thanks to them for their excellent response in what must be an unprecedented research exercise.

## ANNEX TO APPENDIX J

In the following pages we reproduce the questionnaire on research-sharing, etc. (Form 3), with its 'Introductory Note' and accompanying instructions for completing the form. These were sent out to companies as they appear here, under letters addressed to the officials who had dealt with the earlier enquiry.

We also reproduce the 'Simplified Instructions for Completing Form 3,' which were circulated later to selected companies in need of further assistance.

The note to question 12, given on page 398, is particularly important.

## Introductory Note

### Object of the Exercise

The purpose of the attached questionnaire is to obtain information from companies that will throw light on an area of study that received only scant attention in the Interim Report: the question of the advantages to the U.K. of technical feed-back, research sharing and so on resulting from British companies having overseas subsidiaries, etc. It is felt by some companies that benefits of this nature are considerable, and we are now inviting companies to make some attempts to quantify them, however approximate.

One source of gain to the U.K. appears to be the fact that research done in this country primarily for application here can often be charged out in part to overseas subsidiaries who can use its results, so that the U.K. company effectively obtains its research at lower cost than it would if it had no overseas companies – though before this conclusion can be reached it is necessary to consider the possibility that a U.K. company could sometimes sell research results, licences, etc. to foreign firms if it had not set up overseas subsidiaries.

The other important gains result from the receipt by the U.K. parent of useful knowledge of various kinds from its overseas subsidiaries, either without payment or at a charge that is below the cost of obtaining the information (or its equivalent) by other means. The forms of knowledge in question consist both of formal research and informal information acquired in the course of operating abroad, such as performance comparisons, selling techniques and so on.

Throughout the exercise, it should be borne in mind that what we are attempting to discover are the net benefits accruing to the U.K. from overseas investment over and above the profits from overseas subsidiaries. Clearly overseas subsidiaries benefit from research-sharing and informal contact with the U.K., but this benefit is reflected in their profits, which we already know. We are, however, interested in research-sharing between overseas subsidiaries where this is significant.

### Method of Procedure

We hope that it will be possible for you to go ahead rapidly with the completion of the Form once you have read the instructions, though many companies will no doubt have special problems which they will wish to discuss with us. We will be prepared to visit companies either before or after they have filled in the Form if a meeting seems to be required, but in the light of our experience with the companies with whom we have already had discussions we would expect, in most cases, to be able to clear up difficulties over the telephone. Please don't hesitate to ring Mr. C.T. Taylor or Mr. S.J. Potter on Cambridge 58944 about any queries you may have.

Please send completed returns to Mr. Taylor or Mr. Potter at :–

Department of Applied Economics,
Sidgwick Avenue,
Cambridge.

Department of Applied Economics, University of Cambridge

# ENQUIRY INTO U.K. DIRECT INVESTMENT OVERSEAS

## Form 3: Information Relating to the International Sharing of Research and Know-how(1)

Name of reporting U.K. group ........................................

Year to which information relates ...................

1. Sales by U.K. members of group: (£'000)

Home market ...............

Exports ...............

### I. Research and Development

2. Cost of formal research and development done in the U.K.:

(£'000)

(a) Market research ...............

(b) Production research and development ...............

3. Cost of formal research and development done by overseas members of the group:

(£'000)

(a) Market research ...............

(b) Production research and development ...............

4. Payments by overseas subsidiaries etc., to other members of the group (whether in the U.K. or overseas) for supplying information about:

(£'000)

(a) Marketing ...............

(b) Production ...............

5. If manufacturing subsidiaries had not been set up overseas, please estimate how much the group would have been able to obtain through licence fees, royalties, etc. from outsiders, in addition to the payments actually received from outsiders

(£'000)

...............

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(1) Before completing this form please read the Introductory Note and the Instructions for Completing Form 3.

## II. Feedback of Research and Know-how from Overseas

(Please include in this section overseas subsidiaries etc. in any country that was a source of an important "feedback" of knowledge - formal or informal - to the rest of the group, whether in the U.K. or overseas. Please report separately by country, entering the names of countries involved and adding a continuation sheet if there are more than four.)

| | | Country X | | | |
|---|---|---|---|---|---|
| 6. Cost of formal research and development done in Country X: | | | | | |
| (a) Market research | £’000 | ...... | ...... | ...... | ...... |
| (b) Production research and development | £’000 | ...... | ...... | ...... | ...... |
| 7. How much of 6 was essentially of relevance to Country X only: | | | | | |
| (a) Market research | % | ...... | ...... | ...... | ...... |
| (b) Production research and development | % | ...... | ...... | ...... | ...... |
| 8. Payments to subsidiaries etc. in Country X by other members of the group (whether in the U.K. or overseas) for information about | | | | | |
| (a) Marketing | £’000 | ...... | ...... | ...... | ...... |
| (b) Production | £’000 | ...... | ...... | ...... | ...... |
| 9. How much of all types of research and development done outside Country X was primarily intended for the benefit of subsidiaries etc. in Country X* | | | | | |
| (a) U.K. research and development | £’000 | ...... | ...... | ...... | ...... |
| (b) Overseas research and development | £’000 | ...... | ...... | ...... | ...... |
| 10. Payments by subsidiaries etc. in Country X to other members of the group for information about | | | | | |
| (a) Marketing | | | | | |
| (i) supplied from U.K. | £’000 | ...... | ...... | ...... | ...... |
| (ii) supplied from overseas | £’000 | ...... | ...... | ...... | ...... |
| (b) Production | | | | | |
| (i) supplied from U.K. | £’000 | ...... | ...... | ...... | ...... |
| (ii) supplied from overseas | £’000 | ...... | ...... | ...... | ...... |

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* In relation to the other countries in which you have overseas subsidiaries, etc. please consider whether any important amounts of research were done essentially for the benefit of one of them by the U.K. or by a subsidiary in some other country. If so, please state the total amount of such research expenditure (£’000) ...........

| | | Country X | | | |
|---|---|---|---|---|---|
| 11. If manufacturing subsidiaries, etc. had not been set up in Country X, what licence fees, royalties etc. would have been received by the group (whether in the U.K. or overseas) from outsiders, in addition to those that were actually received from outsiders | £'000 | ...... | ...... | ...... | ...... |
| 12. If manufacturing subsidiaries, etc. had not been set up in Country X, what additional expenditure by other members of the group would have been needed to compensate their operations for loss of informal know-how obtained from X | £'000 | ...... | ...... | ...... | ...... |
| 13. (For reporting groups that have sold or taken over overseas manufacturing subsidiaries since 1955)<br>In the light of your experience with these transactions, what percentage addition would you apply in valuing your manufacturing operations in Country X to allow for the difference between their value as 'pure investments' and their value to the U.K. parent as integral parts of the group's business | % | ...... | ...... | ...... | ...... |

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Name of the person to whom enquiries on this form should be addressed ..............................

Telephone number ..............................

Extension ...............

## Instructions for Completing Form 3 on Overseas Investment

### General

Information is requested for your financial year nearest to the calendar year 1964 (or 1965, if that was the final year covered in your previous return). All amounts should be expressed in £ thousand, although some items will be given in much rounder figures.

Please do not regard this Form as an accounting exercise: in places estimates – or even 'best guesses' – will be needed, and you are asked to think in broad terms when filling in these figures.

All companies are asked to complete Section I of the Form, together with the opening particulars. If your company has overseas subsidiaries and/or branches which were an important source of 'feed-back' of useful knowledge, please complete one column of Section II for each country to which this applies - including any countries which were not on the list selected for special attention in the previous forms. All companies are also asked to consider whether the footnote on page 2 applies in their case, and to fill in the figure if it does.

Blanks appearing in any part of the Form will be interpreted to mean "nil" "negligible" or "not applicable". If this is not the correct interpretation, please add a note of explanation.

If you consider that a range would be more helpful than a single figure in some questions, this will be acceptable.

We should particularly welcome any comments, explanations, notes on methods, etc., that you may wish to add to the figures. Please attach a separate sheet if there is not room for the comments on the Form.

We hope to deal with any outstanding points by telephone. Please do not hesitate to call Mr. S.J. Potter or Mr. C.T. Taylor at the Department of Applied Economics (Telephone Cambridge 58944) if you have any queries.

### Definitions

I. Subsidiaries etc. is used in this form to denote your Group's overseas subsidiaries, sub-subsidiaries and branches.

II. Formal Research and Development should be interpreted to comply as nearly as is conveniently possible from your statistics with the definitions used in the Ministry of Technology's Statistics of Science and Technology (London, H.M.S.O., 1967, page 6).

Our preference is for you to include the design, construction, testing and modification of the first prototypes of a new product, but to exclude work on getting the production process going smoothly. Here and elsewhere, however, we do not ask you to worry about fringe or doubtful items, unless they are extremely large.

Please include Group expenditure on research done by outside bodies, as well as that done in your own establishments. Include the cost of research done by you for outsiders (including the Government), but deduct amounts receivable from them for this work. Please do not include licence fees or other payments for research which is the property of outsiders.

III. Informal know-how is intended to refer to all useful expertise arising in the course of company operations which is not a result of formal research.

IV. Intra-Group payments should include royalties, licence fees, technical aid fees and any other payments for formal research or informal know-how, unless they represent reimbursements for the direct costs of transferring information. (Thus, for example, payments by overseas subsidiaries to the U.K. for reimbursing the cost of U.K. personnel visiting or seconded to the overseas operations in an advisory capacity should not be included).

V. Licence fees forgone arise in certain cases as a consequence of the assumption we adopted as part of our approach to the problem of overseas investment: that if the U.K. Group had not set up productive operations in a particular country some non-U.K. company would have taken the opportunity to manufacture in its place. In cases where the U.K. Group would be able to sell production rights etc. to an outsider on a commercial basis, licensing is clearly an alternative to producing locally and the U.K. company forgoes the return from the former if it chooses to undertake the latter.

## Notes on Particular Questions

1. So far as possible, sales should be made up of goods produced or processed by the Group in the U.K. which were disposed of as follows:—

   (a) Home sales equals goods sold to outside customers in the U.K., plus capital equipment for use in the Group's U.K. operations;

   (b) Export sales equals goods sold to outside customers for export plus goods supplied to your overseas subsidiaries (whether for resale or for use) — all preferably valued f.o.b.

2. See Definition II.

3. See Definition II.

4. See Definition IV. Please note that payments between overseas subsidiaries should be reported on a gross basis.

5. See Definition V. The approach to this question should be on a country-by-country basis; that is, you should estimate the extra licence fees that could have been obtained through not having manufacturing subsidiaries in a particular overseas country (the Group's activities in other countries being unchanged), and add up the estimates for each country to give a total for all overseas countries.

6. See Definition II.

7. You are asked to estimate how much of the research done in "Country X" was of a type that was of little interest except in Country X.

8. See Definition IV.

9. Please note that the footnote to this question may be of relevance to you even if you have not completed the rest of Section II.

10. See Definition IV.

11. See Definition V.

12. See Definition III. The object of the question is to try to evaluate the benefits derived by the rest of the Group from the feedback of informal know-how that stems from overseas manufacturing operations in key countries. An effort of constructive imagination is called for in order to estimate the loss to the rest of the Group that would come about if it did not have access to knowledge about technical processes, business methods, selling techniques, etc. originating with subsidiaries in, say, the U.S.A. or Germany.

One possible way of tackling the problem is to judge what amount management in the U.K. and elsewhere would have wanted to add to 1964 expenditure on formal research and development, licence fees, outside consultants, management courses and training schemes etc. - supposing the additional resources to come from a windfall increase in net profits - to compensate for loss of know-how transmitted from overseas subsidiaries in Country X. It might be best to estimate a range of amounts - the upper end of which would be equal to the smallest addition to actual expenditure in 1964 that would leave the Group's remaining operations definitely better-off, despite the loss of know-how; and the lower end, to the largest addition to 1964 expenditure that would still leave these operations definitely worse-off.

An alternative possible approach would be to imagine that the U.K. members of the Group had disposed of some shares in their overseas subsidiaries in Country X, so making them into "affiliated" companies (no longer controlled in the U.K.). It is then proposed that agreements should be drawn up between the affiliates and the rest of the Group for the transfer of know-how in both directions on the basis of the value to the recipient. (Assume that quid pro quo exchanges would not take place under the agreement.) For the purposes of the negotiation, you are asked to advise the management of the group what the value of the incoming knowledge should be put at (as an offset to the value of the outgoing knowledge). What figure would you name – recognising that too low a figure may lead to a failure in the negotiations, and too high a one would mean loss of profit?

Other approaches may occur to you which seem to suit your company's circumstances better; and we shall be glad to discuss this question with you before you complete the form if that would be helpful.

13. This approach was suggested to us in our preliminary discussions. It is one that may recommend itself to those who are accustomed to valuing overseas businesses for one purpose or another. The question is particularly addressed to companies that have sold or taken over overseas manufacturing subsidiaries in recent years.

You should assume, for the purposes of this exercise, that the subsidiaries etc. in question, when viewed as pure investments, would continue (if they wished) to have access to their customary supplies of components or materials, and would retain existing production rights, exclusive dealerships, etc. - except that transactions with the U.K. parent would now be universally on an arms-length basis. Thus the subsidiaries would no longer, for instance, have free or virtually free access to the U.K. parent's know-how, but would pay a commerical price for these privileges. Commissions from selling the previous parent's finished products would similarly be on an arms-length basis.

We should appreciate a brief note explaining how the percentage was arrived at.

## Department of Applied Economics, University of Cambridge

## Enquiry into U.K. Direct Investment Overseas

## Simplified Instructions for Completing Form 3

Several companies have told us either that in their case a good many of the items on Form 3 are negligible, or that an enormous exercise would be required to fill in the Form comprehensively. In order to ease the load for companies, especially where figures are in any case very small, we offer these notes of guidance.

### General

Please do not hesitate to give approximations: questions involving judgements can only be answered approximately, so there is no point in going to great labour to give precise answers to the factual questions.

Wherever it is fairly clear that a figure would be less than £25,000, it is quite satisfactory if you enter "less than £25,000" on the Form – but it is still better if you divide these cases and enter "negligible" in those cases where the figure is probably under £10,000.

### Questions 1 to 5

We should like all companies to answer these global questions. If however the research carried out by overseas members of the group is essentially for local use only, we shall be quite content if companies give "local use only" as the answer to question 3.

### Section II (Questions 6 to 13)

This section of the Form should be filled in for subsidiaries in a country that is the source of significant "feedback" of formal or informal knowledge to the rest of the Group. For this purpose "feedback" can be taken as the cost of formal research done overseas that is not purely local interest (item 6 less item 7) plus your estimate of the value of informal know-how (item 12). We would regard this as "significant" if it exceeds £25,000. For countries where you would judge that feedback is significant but amounts to less than £100,000, it would be quite acceptable for you to list the countries concerned and not to bother to answer questions 6 to 13. Where you feel that the figure exceeds £100,000, however, we would like you to complete these questions. Please feel free to round figures heavily.

For countries where feedback is not significant, we would nevertheless ask you to consider whether question 9 is relevant. Once again, amounts which are probably less than £100,000 can be described as "less than £100,000".

# Appendix K

## List of Companies Added to the Samp

The sample of companies whose returns have been used for the Final Report includes the following in addition to those listed for the Interim Report (see Annex 1 of Appendix B):

Mining

Ashanti Goldfields

Chemicals

Albright and Wilson
Wellcome Foundation

Plantations

(i) Members of the Rubber Growers' Association:

Anglo-Asian Rubber Plantations
Golden Hope Plantations
Kuala Lumpur–Kepong Amalgamated
Kulim Rubber Plantations
Labu Cheviot Rubber
Linggi Plantations
London Asiatic Rubber and Produce
Malacca Rubber Plantations
Merlimau Pegoh
Oil Palms of Malaya
Pataling Rubber Estates
Rubber Estates of Malaya
Straits Rubber
United Sua Betong Rubber Estates

(ii) Members of the Indian Tea Association:

Achabam
Aibheel
Amalgamated Tea Estates
Anglo-American Direct Tea Trading
Assam
Assam Consolidated Tea Estates
Assam Estates
Assam-Dooars
Badulipar
Bagracote
Bamgaon
Bazaloni
Bengal United
Borhat
Brae and Chingoor Estates
British Assam
Cachar and Dooars
Chubwa
Chulsa
Consolidated Tea and Lands
Dangua Jhar
Dejoo

Dhoolie
Dooars
Doom Dooma
Empire of India and Ceylon
Endogram
Gingia
Greenwood
Halem
Hope
Hunwal
Imperial
Isa Bheel
Jokai (Assam)
Kalline
Kanan Devan Hills Produce
Kukicherra
Lankopara
Lebong
Leesh Rover
Longai Valley
Madras Tea Estates
Malayalam Plantations
Marangi
Meenglas
Moran
Nedeem
Northern Dooars
Rowe, White and Co. as agents[1]
Rungajaun
Salonah
R.G. Shaw and Co. as agents[1]
Singlo
Sonabheel (Assam)
Stanmore (Anamallay) Estates
Thanai
Travancore Tea Estates
Upper Assam
Vaghamon (Travancore)
James Warren and Co. as agents[1]
Western Cachar
Geo. Williamson and Co. as agents[1]

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[1] Consolidated return covering a number of tea companies.

# Index to Both Reports

Author's Note – This index does not cover the 'Summary', which is itself a guide to the contents of both reports.

Numbers in bold type refer to tables. Only the main tables relevant to a particular entry are given.

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# Effects of U.K. Direct Investment Overseas

## INTERIM REPORT

W. B. REDDAWAY

*Director of the Department of Applied Economics*
*University of Cambridge*

in collaboration with J.O.N. PERKINS, S. J. POTTER and C.T. TAYLOR

This constitutes the first part of the Department's report on this important topic, to which the Final Report is a sequel: it is essential to read the Interim Report first.

The book discusses in some detail the various effects on the U.K. balance of payments of investment by British companies in their overseas subsidiaries, giving separate figures for each of 15 countries and each of 10 investing industries. Thus it answers such questions as how profitable the investment has proved in terms both of income and of capital appreciation; and what are the effects on British exports of goods and services of (a) the initial investment being made by the parent (b) the continuing activities of the subsidiary.

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The two Reports are of importance to British companies investing overseas, to students of economics and to everyone interested in current issues of public policy.

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